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Home Office COMPUTING

January 1989 \$2.95 Canadian \$3.25

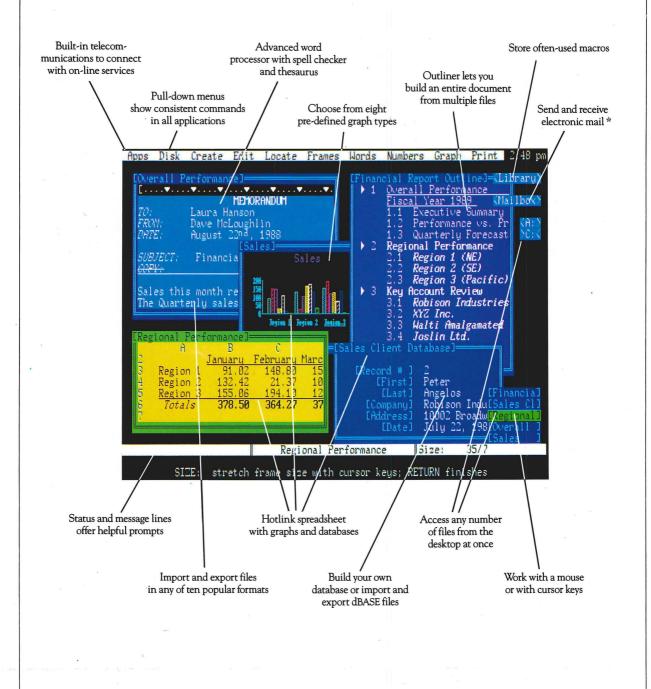
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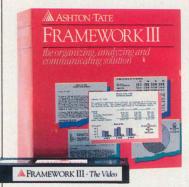
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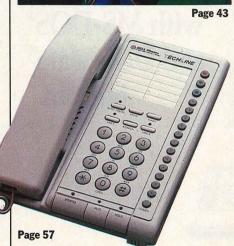
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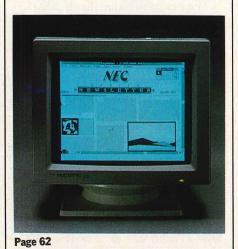
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COVER PHOTOGRAPHS BY KAREN KENT AND JED WILCOX (INSET)

#### FEATURES

#### **COVER STORY**

#### Life After the Corporation: Building a Business of Your Own

Page 43

Meet former executives who struck out on their own and used their Fortune 500 expertise to launch new products and services from their home offices. PLUS: "The Making of a Consultant," an interview with former Commodore International President James Finke.

#### SIDE-BY-SIDE COMPARISON

#### The Top Stars of Word Processing: WordPerfect and Microsoft Word

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What makes these best-selling writing tools so popular? Feature-by-feature comparisons of both MS-DOS and Mac versions.

#### **UPGRADING**

#### **Upgrading Your Computer. Part III: Macintosh**

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Can your old Mac measure up? If your applications have outstripped the capacity of your machine, here's how to add speed, storage, and peripherals to handle the toughest of jobs.

#### **BUYER'S GUIDE**

#### **Two-Line Telephones**

Page 57

Build a professional image with a telephone that offers conference calling, call-hold, and many other features essential to running a business. Includes reviews of 5 top-rated two-line telephones and a chart listing 18 of the best units on the market for \$85 to \$180.

#### PRODUCTS

#### **Equipping Your Office**

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Size, paper feed, cost, or special functions—what should you consider when buying a personal copier? A roundup of available features.

#### **Hardware Reviews**

Page 62

Speed-up Card: Orchid TwinTurbo 12. Disk Drive: Iomega Bernoulli Box II. Display System: Relisys VGA/Multiscan Monitor Bundle. Monitor: NEC MultiSync GS. Printer: Office Automation Systems LaserPro Express Series II. Fax Machine: Olympia Olyfax 100. Copier: Canon PC-7. Telephone: AT&T Speakerphone 480.

Office Essentials Page 70

The latest in useful and innovative office accessories, supplies, and furniture. *This month*: A screen cleaner, a telephone outlet extension, a PC lap pillow, a document binder, all-purpose business forms, and pre-coded disk labels.

Software Reviews Page 72

Full reviews: *MacDraw II*, an update of the first Macintosh drawing program; *Hold Everything!*, a preconfigured database; *Power Desk*, a mailing-list manager/word processor; *Springboard Publisher*, a desktop-publishing package; and *Who-What-When*, a project-management program.

Quick Takes: *Publish or Perish*, a versatile, predefined database, and *Textmate*, a word processor with macros.

#### FAMILY COMPUTING

#### **Editors' Picks for the Best Games of 1988**

Page 84

14 Games That Will Keep Your Mind off Work. Our editors found their favorite games of 1988 in the following categories: Graphic Adventure, Original Format, Arcade, Text Adventure, Simulation, Political/Financial, Sports, Board Game Adaptation, Role-Playing Adventure, Construction Kit, Strategy & Tactics, Educational Game, and Hybrid. PLUS: Game of the Year.

#### **Software for Learning and Leisure**

Page 90

Long reviews: Education & Family Productivity: *Special Days* and *Poetry Palette*. Entertainment: *Sentinel Worlds I: Future Magic* and *Empire*.

Quick Takes: Education & Family Productivity: *Mixed-Up Mother Goose; See the U.S.A.; Math Masters: Multiplication & Division* and *Vocabulary Challenge*.

Entertainment: Demon's Winter; Jordan vs. Bird: One on One; The Manhole; and Star Trek: First Contact.

#### **Entertainment News and Hints**

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Clinic Page 16

Answers to Your Computing Questions. Our technical editors answer queries about data transfer and IBM math co-processors and help a Manhattan executive resurrect valuable data from a damaged hard disk.

Machine Specifics Page 18

Apple IIc Plus Unveiled; TSR Software Management for MS-DOS; Tandy Sponsors Leading Technologies Seminars. Computer and software news, opinions, quotes, and rumors, reported by HOME-OFFICE COMPUTING columnists with an eye on the Apple, IBM/MS-DOS, Macintosh, and Tandy universes.

Working Smarter Page 40

A True Story About the Power of Belief. Ideas, inspiration, and positive tips for succeeding at the work-from-home lifestyle from columnists Paul and Sarah Edwards. This month: The power of optimism; the 30-second housecleaning; and how to write promotional copy that sells.

Workstyles Page 104

Honing That Work-at-Home Image. Working at home doesn't mean you're not working. Our telecommuting Senior Editor Nick Sullivan emphasizes the importance of a professional telephone system in appearing reachable and responsive while you're creating your own answer to *la dolce vita*.

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News, advice, humor, and tips on computing, using home-office technology, and running a home business. *This month*: Fighting viruses that destroy data; illegal home businesses; and a new radio show for the home office.

Word Processing Page 22

Make Your Documents Professional Looking and Efficient to Use. Use your word-processor's indexing function or a stand-alone program to make the information in your documents more accessible.

Desktop Publishing Page 26

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Phone Programs Yield Instant Recall of Any Conversation. Losing track of data and dollars in a flood of phone calls? Here are 5 software solutions that streamline operations and help you build business by coordinating the functions of your computer and telephone.

inance Page 32

Review: Andrew Tobias's Financial Calculator. A review of a new program that lets you analyze, project, and play with dollar figures—before you commit to major transactions.

Telecomputing Page 34

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- 316 Manage clients, sales prospects w/Trackr! 512K, hrd dsk. 2 319 - (2 disks) Keep appointmnts, update agendas w/EzDesk. 337 - Analyze your credit charges, paymnts, interest w/Charge! 383 - Track yr portfolio, get weekly reports w/Mutual Fund Mgr.

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- I ☐ 191 Learn music, US states w/PC-quizzer. Sign lang demo! I ☐ 228 - Build dazzling typing speed practicing w/PC-Fastype. ★ I | 297 - Graphic mathematical puzzle game makes learning fun! |
- ☐ 366 It's simple to keep, average student grades w/Gradescan! ☐ 376 - Teachers & students can summarize grades w/GradeM. 2 384 - (2 disks) XY-See graphic math for HS & college students.

**GRAPHICS** 58 - Display hi-res 3-D molecular structures w/Chemvw. EGA. 2 145 - (2 disks) Paint, draw w/Fingerpaint, design w/Altamira.

2 210 - (2 disks) Create advanced 3D designs! 640K, hrd dsk. ★ 3 285 - (3 disks) Produce grt 3-D images w/Surfmodl graphics. 362 - (2 disks) Edit graphics, colorize pics w/VGACad! VGA.

**GAMES** 15 - Biblemen game tests knowledge of Bible figures/events. 1 23 - Star Trek, Othello2 board game, artillery bombing. EGA. 28 - Play Backgammon, or Wordplay (like wheel of fortune)! |

84 - Three solitaire card games, Spider, Klondike, Canfield! ★1 | ☐ 121 - Qubert, Pango, Centipede, Hopper (lk Frogger), more! ★|

☐ 151 - Hack puts you & trusty dog in a wild adventre (lk Rogue). ☐ 176 - Destroy enemies w/Striker, conquer the world in Risk. ★

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## Going with the Bumps, Bends, and Forks in the Road

It wasn't that long ago that I envied people who claimed they had planned and could control their lives. But with time I have seen countless plans dashed by corporate upheavals, broken romances and failed marriages, family and personal illness, midlife crises, stock market declines, office politics, and other unforeseen circumstances.

I have also seen friends and acquaintances wander off the beaten path as the result of business opportunity, love, a baby, the desire to contribute to society, or just an irrepressible urge to follow an inner voice. In any lifetime, disaster is bound to strike, and opportunity inevitably will call. What happens to people is not what sets them apart. Their responses do.

The countless stories of the ways people react to the bumps, bends, and forks in the road are fueling the growth of home offices and small businesses. I've just returned from Las Vegas, where 95,000 people gathered for Comdex—the giant among computer industry shows. I spent hours listening to fascinating accounts of excited home-based entrepreneurs.

A gambling instructor saw the hordes of conventioneers coming to town as business prospects, and he acted. Now, he has a thriving business producing promotional items for

A head hunter who went out on his own realized he was wasting money on a downtown office and now pulls in \$200,000 a year from an office in his back bedroom.

A desktop publisher came up to me with a slick-looking paperback created in his home.

Some of these stories will appear in future issues of HOME-OFFICE COMPUTING. But the forces that drive these businesspeople and those profiled in this month's cover story, "Life After the Corporation" (page 43), can be found in every issue.

Here are three of the common traits I see among successful entrepreneurs:

1. They believe their course is better than working for someone else. These people know they must be on their own. They chafe at the bit when they try to hold down a job working for a company, feeling frustrated, under-utilized, exploited, and miserable without a sense of control over their work and their destiny.



2. They know what they want to do. These are not people who ask, "I want to work on my own, out of my home. What can I do?" They know. They succeed in large part because of passion, vision, and mission.

3. They see and seize opportunity, or even create it. In this day of increased corporate layoffs and fewer sinecures, it's easy to see patterns emerge. There are confirmed company people who would work at any job rather than go it alone. Others see their coworkers getting fired as an opportunity to become part of the cost-saving measures by starting a business and convincing the boss to cut down on overhead by becoming a client.

I envy these passionate, driven people, much as I do a painter or musician or writer who has to follow his or her art. It seems to me that the bravest, most self-confident, most imaginative people are their own bosses. So I too, despite my near-perfect job working for a humanely and creatively managed company, creating this magazine I love, harbor fantasies of having no job at all, but rather a company of my own. But still lacking those common traits I've been talking about, I only hope my boss doesn't think that's a great idea just yet.

in Core

CLAUDIA COHL **EDITOR-IN-CHIEF** 

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......Steve Levin, Commodore Microcomputers

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#### HITTING THE SPOT

Nick Sullivan's recent column, "How I Became Invisible," (September 1988) really hit the spot. You see, I'm also an "invisible," or "phantom" editor in my organization. Not a field editor or a stringer, I've been a leading member of this magazine for almost 10 years.

I never would have survived in the corporate office. My home-office environment has been instrumental in my meeting deadlines and producing well over 100 technical feature articles, a monthly column, and endless news articles. I also solicit and edit contributed articles from home.

This is not to boast, but to point out that the home-office environment can be an asset in a company and a business where interruption and deadline-missing are the norm. In a chaotic office, a common "solution" is an addition to the staff. Perhaps in many situations, a better solution would be to move one of the more productive staff members out. The best way to prevent someone from getting burned out is to move him or her from the scene of the fire.

> PIETER BURGGRAAF SENIOR EDITOR SEMICONDUCTOR INTERNATIONAL Phoenix, Arizona

It was no accident that I picked up on your magazine, which is now devoted to my exact situation: operator of a home office. You have no idea how much support your magazine has been during my transition to working at home. BILL HARBOTTLE

Lee's Summit, Missouri

#### **FORUM LETTERS**

I just wanted to drop you a line and thank you for the "new" magazine. I found out about the Working From Home Forum through it, even though I've been on CompuServe for many years.

I am building a computer-based home business and am eagerly looking forward to each new issue. Strangely, I had subscribed a few months ago-even though I have no family, and no interest in educational or home-oriented applications-and now I'm very happy that I did.

> **KEVIN GOSSETT** Bonita, California

I am a new member of CompuServe's Working from Home Forum, and this is my first day on-line. Just by chance last night, I picked up the latest issue of HOME-OFFICE COMPUTING and really enjoyed it. I'll try it

subscription.

I have a small family-owned business that does contract cleaning and wholesaling of cleaning supplies and security systems. We're looking into mail-order marketing possibilities, and hope to find some useful tips in your magazine and in the HOME-OFFICE COMPUTING data library on the Working From Home Forum.

> PETER GILMARTIN Camden. New Jersev

#### **TELECOMMUTER WRITES**

I have been telecommuting off and on over the last five years. I especially like seeing photos of other offices for comparison to my own, and I was wondering if you could use a wide-angle lens to get a larger view in some of these offices, rather than showing just one side or corner. JAMES LEITERMAN

> SIERRA COMPUTER ENGINEERING Soulsbyville, California

EDITOR'S NOTE: Below is a wide-angle shot of the home office of Michael Gosney, whose desktop-publishing business was featured in our July 1988 cover story. Unfortunately, this type of lens gives human figures the Fun House effect, so we generally use standard lenses for our profile photography.



#### **WAIT AND SEE**

I was relieved to read in the September issue (Letters, page 8) that you will be including "an extensive Family Computing section" in subsequent issues. I, like the writer of that letter, didn't know that 11 of my next 12 issues would be aimed at home-office readers. My purpose in subscribing to your magazine was to keep informed about computer developments. I hope that the rest of the issues in my subscription meet that need.

> JOHN FUNK Fort Mill, South Carolina

I haven't yet decided if I am pleased with the change to HOME-OFFICE COMPUTING, al-

again next month and decide on a though I must admit my wife and I are investigating the possibility of starting a home payroll service for small businesses. I'm reading my remaining issues carefully to see if they will help.

> DOUGLAS R. HANSELL Durham, North Carolina

#### **FINDING FINANCIALS**

Readers seeking information on Ronstadt's Financials (November 1988, page 51) may write to Lord Publishing, One Apple Hill, Natick, MA 01760, or call (800) 525-5673 or (508) 651-9955.

#### CORRECTIONS

MECC (Minnesota Educational Computing Corporation; [612] 481-6500) is the correct publisher for The Oregon Trail and Number Munchers listed in "Best Selling Software" in November 1988 (page 100). MECC is a 15-year-old software company based in St. Paul, Minnesota.

Simplified Employee Pensions (SEPs) can be administered up to April 15, however, since the 15th is a Saturday, the deadline is the next workday (see "Last-Chance Tax Breaks for '88." December 1988 issue).

#### LET US KNOW ABOUT YOUR BUSINESS OR HOME OFFICE

We're eager to hear about readers' workfrom-home experiences and needs. If you, a friend, or an associate operates a home-based business, telecommutes, or works at home for a corporation, please let us know about it. Give us a few details, such as the startup story; financing methods; marketing strategies; family members involved; and the computers, software, and related products that are used. Include the business name, address, telephone number, and a photograph if you have one.

HOME-OFFICE COMPUTING looks forward to letters from all readers. Please direct correspondence to Letters to the Editor, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Include name, address, and telephone number. Letters become the property of HOME-OFFICE COM-PUTING, and may be edited for length and clarity. Although we read and consider all letters, we regret that our volume of mail prevents a personal reply to each one.

## Home Office COMPUTING

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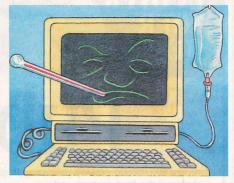


CIRCLE READER SERVICE 58

### Fighting Viruses That Do In Data

Computer viruses—"contagious" program bugs like the one that recently infected government mainframes—also threaten anyone who downloads public-domain software from bulletin boards. To date 40 viruses have been reported, according to Don Parker, senior management consultant for SRI, a research and consulting institute in Menlo Park, California. That number represents a dramatic increase in recent months. One computer disease, called the "Pakistani Brain Virus" has already invaded an estimated 100,000 IBM PCs worldwide.

There's no sense taking chances with vital data on your hard-disk drive. While viruses don't usually present a threat to computer hardware, according to Trevor Griffiths, engineering manager for Apple Computer Inc., applications and data files stored in a hard-disk drive can be irrevocably lost or de-



stroyed. Whether or not data can be retrieved "depends on the amount of damage, and where on the disk it was done," he says.

You can protect your computer by practicing "safe computing." Here Griffiths gives some tips:

1. Download application programs only

onto floppy disks-never onto hard disks.

- **2.** If you have an external hard-disk drive, turn it off when you run software copied from bulletin boards.
- **3.** Don't trust public-domain software just because the friends or colleagues you got it from have used the programs trouble-free. Viruses can have "latency periods" of up to several years.

Some companies are working on "vaccines" that "immunize" computers against viruses. Corporate Vaccine Version 2.0 (\$189 for the 384K IBM PC) is now available from Foundation Ware in Cleveland, Ohio (Call [800] 722-8737). Virus Rx for the Macintosh is in the public domain and is available through authorized Apple dealers. But "you just can't depend on them," says Griffiths. The best idea is to play it safe.

-BRIANNA POLITZER



## Tune In to the Home-Office Radio Show

Get ready for the week ahead by tuning in to *The Home-Office Show*. This new Sunday night radio show is broadcast live from the home office of Sarah and Paul Edwards, home-office consultants and authors, in Santa Monica, California. They host the nationwide hour-long program at 7 p.m. Pacific

time (10 p.m. Eastern time). Sarah and Paul, who "came home to work" in 1974, operate the Working From Home Forum on Compuserve, are members of the HOME-OFFICE COMPUTING advisory board, and write the Working Smarter column each month.

Every Sunday night, the husband-wife

team interviews home-office experts, discusses issues and problems, and shares tips, resources, and ideas with you. Listeners call in on an 800 number with questions and comments. It's a lively hour of provocative and informative discussion, topical interviews, and positive energy that will get you ready for the week ahead.

—LISA WU

The Home-Office Show
WJMW Huntsville-Decatur, AL
WPGC Washington, DC
WFSH Mobile, AL; Pensacola, FL
WYUR Jacksonville, FL
WTWF Tallahassee, FL
WNDS Greenville, NC
WKEN Philadelphia, PA
WIBR Baton Rouge, LA
KKUL Portland, OR

### When the Chips Are Down

There are forces stronger than profit-hungry manufacturers behind the recent hikes in computer prices. The undercutting of Dynamic Random, Access Memory (DRAM) chip prices by the Japanese, the demand for PCs and peripherals with more memory, and a trade agreement that flopped are all playing key roles in the cost of computing.

In less than 10 years, the U.S. world market production share of DRAM chips, used in memory storage, has plummeted from almost 100 percent to less than 20 percent. The major reason is that Japanese companies had been "dumping" chips on the United States market: selling chips at

below cost and as a result, forcing U.S. chip makers out of the market.

Fearing that our computer industry was becoming too dependent on foreign DRAM chip suppliers, the United States signed a trade agreement with Japan in September 1986 that set a limit on the number of chips entering the United States as well as a minimum price for them. The main purposes of the trade agreement were to encourage former chip makers in the United States to reenter the market and to stabilize the price of the chips.

But the trade agreement caused a shortage of DRAM chips just as the personal comput-

er market was accelerating, resulting in intensified demand and skyrocketing chip prices. In the past two years, the price of the 256K-bit memory chip has jumped from a little over \$2 to as high as \$15. In the wake of the chip shortage and the chip price hike, many computer makers—among them Apple, AST, Dell, and Hewlett-Packard—are increasing their prices, and many computer companies are cutting back on production. And no new U.S. chip makers have entered the market. Currently, only three United States companies make DRAM chips: Texas Instruments, Micron Technology, and IBM.

-STEVEN C.M. CHEN



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Author Bruce O'Hara teaches you to redesign your job to fit your life.

### New Ways To Work

Goodbye nine to five, hello flexible work time. Put Work in Its Place by Bruce O'Hara (Work Well Publications, Victoria, B.C., Canada, \$12.95) is a practical, sometimes humorous handbook that leads you through the step-by-step process of redesigning your full-time job to fit your life. It's by Bruce O'Hara, director of Work Well, Canada's first work options resource center.

The book explores new ways to work and instructs you on how to write a proposal to persuade your employer to accept an alternative job design. Homework/telecommuting, job sharing, permanent part-time, leaves of absence, voluntary reduced work-time, banked overtime, phased retirement, "flexitime," and compressed and modified work weeks are discussed.

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—LIS FLEMING

### Are You Harboring an Outlawed Business?

You may be breaking the law and not even know it. Local zoning regulations may prohibit the very existence of your home-based business. These zoning ordinances—which vary from city to city and county to county—date back to the days of smokestack factories. To protect residents from industrial noise, dust, smoke, smell, and traffic, businesses in residential neighborhoods were often prohibited. Here's where some of the old laws stand:

- In Chicago, any use of the home as a primary business office is illegal. Although amendments to modify the law have been proposed in past years, none have been implemented.
- In Los Angeles, home businesses are also illegal, though an amendment that might permit certain types of home businesses is currently being reviewed by the city council. Mayor Tom Bradley and the City's Telecommunications Commission recently announced a telecommuting project to reduce commuter traffic by having city employees work from home offices.
- In both the city and the county of Sacramento, California, home businesses are only



permitted within certain guidelines. For example, in the city, no more than 10 percent of living space can be used for business operations.

• In Wichita, Kansas, although making and selling arts and crafts is allowed, it is illegal in certain districts to "manufacture or process" anything, conduct business in a garage, or display a business sign.

Noise, smoke, and traffic are legitimate neighborhood concerns. But today's service businesses are a far cry from yesterday's smokestack businesses. Communities are now working on the passage of home business ordinances, with the emphasis on retaining the residential character of neighbor-

hoods. The Davis, California, "Home Occupations Ordinance" is being used as a model by many communities. (For a copy, call [916] 756-3746.)

Coralee Smith Kern, executive director of the National Association for the Cottage Industry—who runs Maid-to-Order from her Chicago home—urges fellow home-business owners in Chicago to attend city council meetings and educate the members. She also encourages others to run for the city planning board and the city zoning board. "If the building inspector comes to shut me down, just let me know when he's coming and I'll have 60 Minutes here," declares Kern.

LIS FLEMING

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## Turning Word Processing And Foreign Language Skills Into Businesses

#### BY JOANNE PRATT



New Year's greetings to all of us in home offices! Has everyone noticed that we've suddenly become visible? It looks like 1989 will be our year to get the attention of office product suppli-

ers. Let's take the opportunity to think about how we could make a cluttered workplace into a more enjoyable, productive environment. What kinds of products and services could you use? Furniture? Another phone line? Send me your wish lists, and let's compare notes.

Q. I would appreciate marketing advice on starting my own word-processing business. I have 35 years of secretarial and three years of word processing experience.

YVONNE L. CARDIEL
Tucson, Arizona

A. I learned of a clever marketing idea when I gave a speech at the New Mexico Press Women's state convention. About a dozen freelancers had joined forces to advertise to local companies. They mailed out a professional-looking flier that listed their business names, their locations, and the special services each offered. You might try it in your community. The trick is to work with people who have services and locations that complement rather than compete with your own.

But first, to get started, refer to the November 1987 issue for an outline of how to set up your word-processing business and refer to the October 1988 issue for the article "How to Do Your Own Public Relations." Order back issues by sending \$4.25 for each issue to HOME-OFFICE COMPUTING, Back Issues, P.O. Box 717, Cooper Station, New York, NY 10276-0717.

Next, send \$3 for a sample copy of "Keyboard Connection," (P.O. Box 338, Glen Carbon, IL 62034) a new quarterly newsletter for word-processing professionals. You'll find excellent marketing and problem-solving advice as well as a network of friends in the same business. You might want to invest another \$3 plus SASE (with two 25-cent stamps) for a packet of sample materials that

includes business cards, rate sheets, a promotional flier, and a sales letter assembled by Editor Carla Culp.

Q. My background is in agricultural engineering and marketing, and I am fluent in Spanish.

Could I support my family by providing a translation service?

CARLOS A. FIGUEROA

Westville, New Jersey

**A.** Language skills are marketable if tied in with a specific professional expertise. Translation jobs go to petroleum engineers, chemists, and other persons who are fluent in a

by the word.
The highest rates go to those who know languages such as Arabic and Japanese and own word processing equipment that can handle those languages.

foreign language and in the technical jargon of their profession. For example, lawyers who know how to use contract terms correctly are in demand to translate international contracts.

Translators are paid by the word, with the highest rates going to those who know languages such as Arabic and Japanese and who also own word processing equipment that can handle them. Spanish is very competitive, as you might guess, so the fees are lower. Write or call the American Translators' Association, (109 Croton Avenue, Ossining, NY 10562; [914] 941-1500) for a free information kit. Then look in the Yellow Pages under

"Translators" for names of local and national companies to contact.

#### A READER RESPONDS

Here are some resources for romance novelists from a reader who writes:

In the May 1988 issue, Beverly Petty asked about getting started in writing romance novels as a business. Here are a few books to help her along the way: Guide to Fiction Writing, by Phyllis Whitney (Writer Inc., 1982; \$12.95); How to Write a Romance and Get it Published, by Kathryn Falk (New American Library, 1984; \$4.95); and Techniques of the Selling Writer, by Dwight Swain (University of Oklahoma Press, 1974; \$9.95). There is nothing more frustrating than attempting your first romance novel with no support system. I know, I've been there.

CHRIS ANDREWS

Moses Lake, Washington

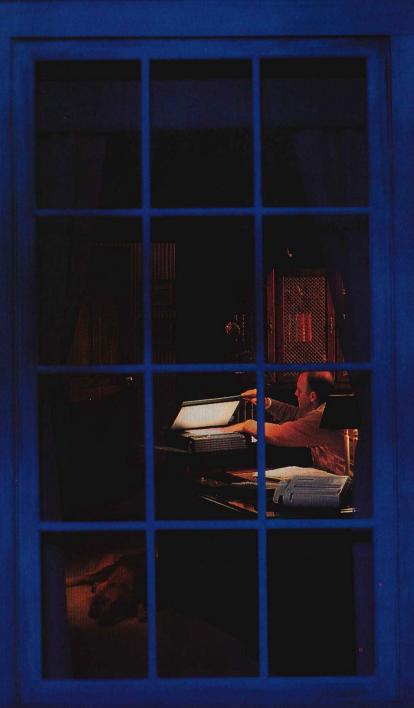
#### **BUSINESS OPPORTUNITIES**

Have you wondered how to start a homebased business? Maybe you could operate your present business or profession from your home. Here are examples:

- A stockbroker has all of his or her calls forwarded from the downtown brokerage. Clients need never know that he or she works in a spare bedroom.
- An architect working from a home office saves equipment costs by using neighborhood reproduction and facsimile services. In lieu of hiring full-time staff, he or she draws upon a network of freelance draftsmen and interior designers and a temporary bookkeeper and secretary when needing support personnel. ■

#### **SEND US YOUR HOME-OFFICE QUESTIONS**

Send your questions on taxes, legal issues, developing a business plan, capitalizing, marketing and public relations, or any other business-related issues to Joanne H. Pratt, c/o ShopTalk, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Please print your name, address, and telephone number on all correspondence. Pratt is a nationally known researcher, consultant, and speaker on the subject of home business.



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## Answers to Your Computing Questions

#### **EDITED BY JEFF DONAHUE**

#### **MINI-MACRO PRIMER**

**Q. What is a "macro"?** GLORIA SHEPHERD Bronx, New York

**A.** "Macro" comes from the word macroinstruction. On the user end of things, a macro is a simple labor-saver—a one- or two-keystroke command that is easier to type than the full sequence of instructions it represents. Users of *AppleWorks* will be familiar with pressing the "Open-Apple" key and the "P" key to call up the document printing function, for example. Word processors, spreadsheets, and many other applications programs offer macro capability.

In programming terms, a macro is a single instruction that represents several lines of often-used code. For instance, a macro called "MESSAGE" could represent a routine that clears the computer screen, prints a message, waits 10 seconds, and then returns to the main program. So instead of having to type instructions every time you wanted to show the message, you could simply type "MESSAGE," and the computer would perform all of those commands.

#### **DATA TRANSFER**

Q. I would like to know how to transfer the AppleWorks data from my Apple IIc to my Leading Edge without having to retype it all. I read an article in the June 1986 issue that said it was possible to do this directly via a cable hookup, but it didn't give any specifics. How can I do this?

CHARLES ROLLINS

Huntsville, Alabama

A. You can transfer your data to your Leading Edge fairly easily by using a device called a null-modem cable (available at most computer dealerships). This is a special serial cable that has a twist in the interior wiring, which lets you connect two computers directly. A standard serial cable only allows you to connect a computer to peripherals.

Essentially, what you want to do is transfer your data with a communication program, but without a modem. After attaching the null-modem cable to the serial ports on the Leading Edge and the Apple, you set up a communications program on both computers. [NOTE: These programs must specifically support ''direct connect'' for the transfer to work.] If everything is correct, you can then upload your files across the cable to the recipient computer. ASCII, DIF, SDF, and any other file formats that you could normally send via modem will be transferable between computers.

#### **IBM MATH COPROCESSOR**

Q. I have an IBM PS/2 Model 30. What will a math coprocessor do for my computer?

B. SMITH New York, New York

A. A math coprocessor is especially useful in speeding up engineering, scientific, and other applications requiring many mathematical calculations, such as those in a CAD/CAM (computer-aided design and manufacturing) system. Spreadsheets, also, will be given a boost in recalculation time. But unless you are involved with math-intensive tasks such as these, you will not see a difference in the way your computer operates; databases will take just as long to find a record, and games will run at the same speed. If, however, a math coprocessor is what you're looking for, they are available from some of the big guys like IBM for anywhere between \$324 and \$2,400.

#### **PRINT SHOP UPDATE**

Readers of our October issue will recall a

question in this column that asked whether *The Print Shop* (Broderbund Software) supported 24-pin printers. At the time, the answer was no. However, as the October issue was being published, Broderbund announced the release of new MS-DOS versions of *The Print Shop* and *The Print Shop Companion* that support 24-pin and laser printers. The new versions are available in stores now, and owners of previous copies of the program may receive an upgrade for \$7.50 including shipping and handling. If you have any questions, call Broderbund's customer service number at (800) 527-6263.

If you have technical questions or computer ailments that need diagnosis, our technical staff will try to help. Although we cannot answer each letter personally, this column will deal with frequently asked questions and common problems. Send your letters to Clinic, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003.

#### HOME-OFFICE COMPUTING SAVES THE DATA . . .

Last September, Philip Whitney, a magazine circulation consultant from New York City, experienced many a computer user's worst nightmare: the dreaded hard-disk crash. One Friday morning he came into work and turned on his Compaq 286 portable computer only to discover that his 20MB hard-disk drive would not boot up. He turned the system off and tried again. Still nothing. He started to panic. More than \$100,000 worth of circulation data and market research was on that hard disk . . . and he had not backed it up since January.

He tried again, this time booting the machine from his floppy drive, but discovered he still couldn't access his files. Various software utilities were of no help, nor was Compaq customer support—the company provided no data retrieval services. He was at his wit's end.

Luckily for Whitney, HOME-OFFICE COMPUTING researcher Brianna Politzer found Data Memory Corp. for him, a company specializing in data retrieval. Within four days, the Woodland Hills, California, company dissected the faulty drive in a hermetically sealed "clean room," saved the data to floppy disks, and returned the disks to the ever-grateful executive.

The moral of this story? Back up those

hard-disk drives! (See the "Miniguide to Tape-Backup Systems" in our December 1988 issue.) If, however, your hard drive crashes when you don't have complete backups, check your manuals and try calling the company that services your computer. There are also several utility programs designed to recover as much data as possible from a crashed disk (PC Tools, Mace Utilities, and others). But when all else fails, there are a number of companies that will come to your rescue:

Data Memory Corp. 6130 Variel Ave. Woodland Hills, CA 91367 (800) 848-3282

Disk Drive Repair, Inc. 863 Industry Dr. Seattle, WA 98188 (206) 575-3181

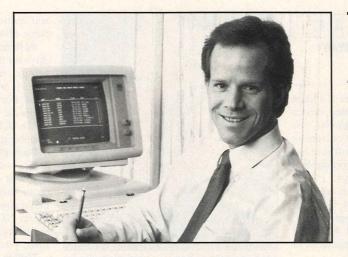
Ontrack Computer Systems, Inc. 6200 Bury Dr. Eden Prairie, MN 55346 (800) 752-1333

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## Apple IIc Plus Unveiled

## TSR Software Management for MS-DOS

## Tandy Sponsors Leading Technologies Seminars

#### APPLE/MAC

BY CHARLES H. GAJEWAY

#### MAC

The MacRecorder Sound System (Farallon Computing; \$199) is an intriguing device that plugs into a serial port and lets you record digitized sound, either live or from an electronic source. The included software lets you control and modify your recording in a seemingly endless number of ways.

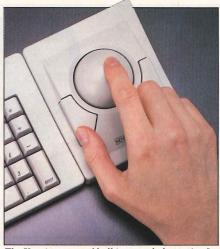
Another superb music product is *Jam Session* (Broderbund Software; \$50). The program comes with a variety of songs ready to go; in addition, you can record your own solos, put together your own arrangement, or compose your own songs!

**Open It!** My favorite new desk accessory is *Open It!* (TENpoint0; \$80) from a new division of Mediagenic. *Open It!* is a scrapbook replacement that lets you share and manipulate data in document files, even if you don't have the program that created the file! You can save anything in *Open It!*, then resize it, change fonts; even select, copy, and cut portions of a page. It's a winner.

So is *1st Aid Kit* (1st Aid Software; \$99), a full-scale disk-utility program that can save you when something awful happens to your floppy or hard disk. Get this program; you will need it, sooner or later.

Mouse Maintenance. Ergotron's 360 Mouse Cleaner (\$17) is an ingenious device—a Velcro-covered ball that thoroughly scrubs accumulated gunk from the rollers inside your mouse. This handy gadget is a must for any mouse user.

If you don't have enough room on your desk for a mouse, think about replacing it with a trackball—an "upside down mouse" that remains stationary while you move the ball to control the cursor. Asher Engineering and Kensington Microware both have desktop-bus trackballs for the Mac SE, II, and the Apple IIGS. The Asher unit (\$99) is the most compact and least expensive. The Kensington unit is a bit pricey (\$170) and feels clunky next to the sleek ADB keyboards, but



The Kensington trackball is a good alternative for mouse users who have limited desk space.

the version for older 9-pin mouse ports snuggles next to a Mac 512, Plus, or even a IIe.

#### APPLE II

Apple's new IIc Plus (\$675) runs three times as fast as the original IIc. Its built-in floppy disk-drive is a 3.5-inch, not the "old-fashioned" 5.25-inch, and the power supply is built-in. The IIc, always a sleek and efficient system, is made more so with these changes

#### MACHINE SPECIFICS TELEPHONE NUMBERS

Apple Computer Inc. (408) 996-1010
Asher Engineering (818) 962-4063
Brittain System Inc. (214) 528-3020
Broderbund Software (800) 527-6263
Chinook Technology, Inc. (800) 727-5544
Claris Corp. (415) 960-1500
Ergotron, Inc. (800) 888-8458
Farallon Computing (415) 849-2331
1st Aid Software (800) 843-3497
Insite Peripherals (408) 727-8484
Kensington Microware (212) 475-5200
Mediagenic (415) 329-0500
Radio Shack Bus. Products Div. (817) 390-3700
Waterworks Software (714) 545-3321
Zip Technologies (800) 453-3232

and continues to be a good machine for the home office.

**lic Hard Drive.** At last, there's another hard drive for the IIc, the CT-20c (Chinook Technology, Inc.; \$750). However, the 20MB drive is more expensive than the computer itself! For IIe and GS owners, the same firm offers the CT-20 (\$650) and CT-30 (\$750). These SCSI-interface drives give First Class Peripherals some stiff competition.

Claris MultiScribe. I've always liked Multi-Scribe — both the IIe/c and GS versions, and now that it's a Claris product, it will get better distribution and dealer support. The GS version even has a new name — Apple Works GS. Try it; you'll like the distinctive appearance made possible by a variety of fonts, plus its truly WYSIWYG operation.

**ZipChip.** Tired of waiting for *WordPerfect* or *MultiScribe* to finish searching? Try a ZipChip (\$179), the slotless accelerator replacement for the 6502 and 65C02 in the IIe/c/Plus. The Apple II can now run three-anda-half to four times faster without using a slot, thanks to Zip Technologies. The chip replaces the CPU on the motherboard so, if you're out of spare slots (or if you never had any), you're in luck. Add a ZipChip and a 3.5-inch drive to your standard IIc and you basically have the new IIc Plus.

CHARLES H. GAJEWAY can be reached on CompuServe (ID: 73357,3577) or on GEnie (ID: C GAJEWAY).

#### IBM/MS-DOS

#### BY HENRY F. BEECHHOLD

What will happen to the IBM PS/2 Model 25 and standard Model 30? They have begun to fade in favor of MicroChannel computers—Models 50 and up. The MicroChannel idea may be at last catching on—at least with some corporate users. Yet more and more buyers are turning either to non-MCA 286 and 386 computers or to the Macintosh. No wonder IBM keeps making announcements.

**Taking Another Bus.** A large group of MS-DOS computer manufacturers, including



#### The Problem

Computers sit idle and software snoozes on the shelf because the manual is so "complete" that it's difficult to find the simple instructions you actually need.

So much time is wasted because data is lost, or files are not managed properly because DOS is hard to understand.

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#### **Project Management**

Everyone is involved in projects, whether a simple home improvement to sophisticated product launching or business planning. Now is the time to computerize an learn how to save time an money by using project management software. Gantt, Pert, and CPM are no longer a mystery. LogicWare helps you understand how they work and the benefitis from proper planning. LogicNotes give you useful hints and complete activity lists of the most common projects for the home or office.

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It's time to really learn how DOS works. Instead of concentrating on the massive power of all those cryptic commands that you never use, *LogicWare* shows how the most commonly used keystrokes manage all your files and open up the world beyond that blinking C> prompt. *LogicNotes* gives you easier keystroke directions and ideas to better use DOS.

#### Accounting

Now is the time to computerize your home or office accounting. It's easier and more accurate, and there are great accounting packages for under \$100. LogicWare presents all the accounting you need to understand computer accounting. From single and double entry, cash and accrual, general and sub-ledgers to financial statements, it's all easy with LogicWare. Its companion, LogicNotes give you easy to follow flow-charts and complete samples of home and office charts-of-accounts, and guides to select the right software and hardware.



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#### MACHINE SPECIFICS

Compaq and Tandy, have agreed on a non-MicroChannel bus design dubbed "Extended Industry Standard Architecture" (EISA).

The new design improves on the existing AT bus, in part by taking full advantage of the 386's higher clock speed, and unlike MicroChannel, the new bus can also use existing AT expansion boards, thus protecting the user's investment.

MultiMegabyte 3.5-Inch Floppy. If you're thinking about adding a tape backup system to your MS-DOS computer, it may pay to wait for Insite Peripherals' "Floptical" drive, a combination magnetic and optical disk drive that uses a modified 3.5-inch microfloppy disk to store over 20MB of data. That's almost 14 times as much as a 1.44MB disk. Product availability is set for early 1989. Initially, the cost is expected to be about \$500 for the drive and less than \$20 per disk. Now we're moving in the right direction.

Rumors of 8088 Death? Dell Computer Corporation (formerly PC's Limited) is dropping its 8088 computers and will manufacture only 80286 and 80386 computers. Does this truly ring the death knell (which we have heard rung before) for 8088? Hard to say. 8088 PC and XT clones are still widely sold, with new models coming out regularly.

Managing RAM-Resident Software. TSR

("terminate and stay resident") or RAMresident software such as SideKick Plus can be mighty handy, but if you have more than a couple of these programs hovering about at the same time, conflicts can arise that may send everything into never-never land. Besides, TSRs use memory that's often better used for that big spreadsheet, database, or document of yours.

RAM Lord, (Waterworks Software; \$100) is a TSR manager that allocates only enough memory for the largest of your TSRs, and swaps the RAM-resident program in and out of that space as needed. Up to 20 such programs can be installed under RAM Lord control, which can be run from disk or from standard, expanded, or extended memory.

A cut-and-paste feature lets you transfer ASCII data from one application program to another. Unrelated software can be integrated to a certain degree. You control everything from a hot-key pop-up menu, and can drop the whole shebang out of memory in two strokes.

**List Management.** BSI Express, (Brittain Systems; \$100), a "name-list management system," is a specialized database manager designed to print names (and addresses where appropriate) on mailing labels, badges, index cards, Rolodex cards, shipping labels, and freight bills (Airborne,

DHL, Emery, Federal Express, Purolator Courier, and UPS). There's also a mailmerge facility for use with Microsoft Word, WordPerfect 5.0, WordStar, dBase III, and ASCII-compatible software. The program is menu driven, with fixed-field screens for data entry. You can enter up to a billion names (if you've got the storage space and the patience to handle that many!).

Although the dBase III source code of BSI Express is included so you can tweak the program, you'll probably find that it works just fine right out of the box.

HENRY F. BEECHHOLD is the author of The Brady Guide to Microcomputer Troubleshooting & Maintenance (Brady Books, Prentice Hall Press, New York).

#### TANDY

#### BY STEPHEN MILLER

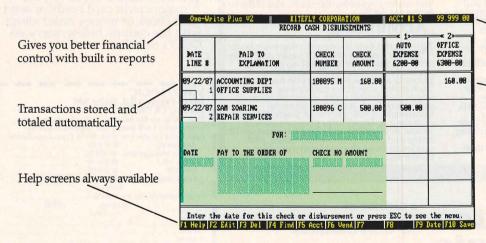
At times it's difficult to get answers to your business computing questions in anything but a piecemeal fashion. It would be helpful to occasionally get a group of vendors together in one place and find out exactly what's going on. How are all the new computers and new operating systems going to affect your current systems? Which software works with your equipment, which upgrades

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#### MACHINE SPECIFICS

are really necessary, and how do you plan your purchases when the technology seems to be changing daily?

Tandy-Sponsored Seminars. Tandy is offering a series of free seminars that will help you get some answers. The company is bringing together leading computer vendors as well as industry experts to explain what's going on. (Claudia Cohl, editor-in-chief of HOME-OFFICE COMPUTING, will appear on the January 24th panel in Los Angeles.) The Leading Technologies Seminars are one-day sessions that will offer presentations, discussions, and exhibits—from leading computer vendors—on both the present and future of business computing.

Companies participating in the seminars are Aldus, Ashton-Tate, Borland International, Digital Communications Associates, Intel, Lotus Development Corporation, Microsoft Corporation, Open Systems, The Santa Cruz Operation, Symantec, Software Publishing Corporation, Tandy Corporation/Radio Shack, 3Com Corporation, and Word-Perfect Corporation. Representatives from each of these companies will be on-hand to demonstrate their products and answer questions.

According to Bob Myers, vice president of Radio Shack's Business Products Division, these seminars "will give participants a better understanding of today's standards and their likely effect on business computing for the 1990s, as well as what to expect in the area of making computers easy to use."

Scheduled topics include graphical interfaces—such as Microsoft Windows and Tandy's Deskmate—the OS/2 operating system, workgroup computing under local area networks, and telecommunications. For the date and location of the seminars in your area, check with a Radio Shack Computer Center or call the Radio Shack Business Products Division.

**Deskmate 3.0.** I've always loved the design of *Deskmate*, Tandy's integrated program. In its earliest incarnation, *Deskmate* had five applications lined up on screen plus a notepad and a calendar/scheduler. By simply moving the cursor to the proper application and pressing the ENTER key, you could activate the program. Over the years, *Deskmate* has evolved from a simple "get-youstarted" program to the current 3.0 version, which is becoming the only program some users might ever need.

One recent improvement is the ability to place other programs on the opening menu. After a simple operation, I can now run my favorite non-*Deskmate* programs from the *Deskmate* menu.

Tandy has now licensed the Deskmate in-

terface to a number of major software vendors, who are rewriting their programs to work in the *Deskmate* style. Some of these remakes should already be available. For *Deskmate* users, it means that you won't have to learn a new command structure to take advantage of more powerful programs.

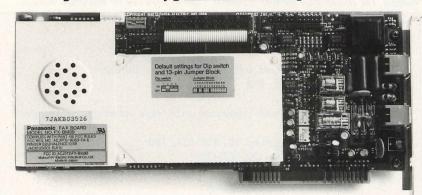
Hard-Disk-Drive Alert! If you purchase a Tandy 4000 or Tandy 3000 with the intention of using a third-party hard drive, the Tandy hard-drive controller board (25-4060) must first be modified. Tandy says that failure to perform this modification may result in a damaged controller board. Radio Shack Service Centers can do the modification.

Tandy 1000 SX/TX Hi-Res Monitors. If you own a Tandy 1000 SX or TX and want to use a high-resolution color monitor, the EGA/CGA Graphics Adapter (Cat. No. 25-3048) can be adjusted to work properly. For a VM-5 monitor, set the adapter DIP switches 1-5 in this order: off, off, on, off, off. For a CM-5 or CM-11 monitor, set the switches: off, off, off, on, off. For an EGM-1 monitor set the switches: off, on, on, off, off. DIP Switch #5 should always be off when installed in a Tandy 1000 SX/TX. ■

STEPHEN MILLER can be reached on Tandy's PC Link on-line service (ID: PCSTEPHEN) where he hosts the hardware forum.

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- 1. IBM is a registered trademark of International Business Machines Corporation.
- 2. Barbara Clifford and Sally J. Price, "PC FAX BOARDS," Info World, April 25, 1988.

# Make Your Documents Professional Looking and Efficient to Use

BY HENRY F. BEECHHOLD

#### How to Craft an Index Using Any Word Processor

To efficiently use a manual, report, or other reference document longer than a few pages, a reader must be able to find specific information—quickly. A table of contents helps, of course, but an index is indispensable. Not only is a well-designed index a valuable research tool, but its presence gives the document a truly professional quality.

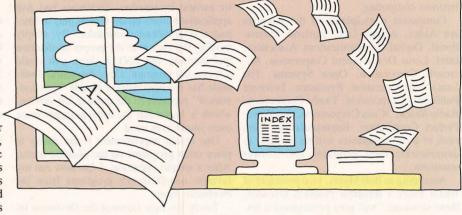
Indexing is both a conceptual and a practical activity. On the conceptual side, the fundamental issue is how to select items to index. On the practical side, you need to know the mechanics of producing the index itself.

Most of the costlier word processors include an indexing module. But what do you do if you're happy with your friendly old word processor and don't want to spend either the money or the time it would take to buy and learn one of the behemoths, yet you're working on a document that really should be indexed? Let's look first at the concept of the index, then at two practical ways of making one.

#### WHICH WORDS DO YOU INDEX?

In essence, an index is an alphabetical, page-referenced listing of words, names, and phrases pertinent to a document's contents. Generally speaking, an index lists nouns—that is, words that serve as the subjects and objects of sentences. Other kinds of words—adjectives and verbs, in particular—can also appear, although these are less frequent. But of the many nouns on a given page, which ones warrant being called out in an index?

In William Zinsser's excellent book on writing nonfiction, On Writing Well, the



following sentence appears: "Humor is the secret weapon of the nonfiction writer."

Given that the focus of the chapter from which this sentence comes concerns humor,

and not weapons, it wouldn't be useful to index "weapon" (from its appearance in this sentence anyway). Clearly, "weapon" is an important word, but in some sense it's beside

Whether you choose to index "by hand" or with an add-on program, the style will be governed by the type of document that you're creating. While primary references are simplest to create (Example 1), the head/subhead type (Example 2) is most generally useful—with reports, for example. The chapter/page methods (Examples 3 and 4) work well for instruction manuals.

#### SIX WAYS TO INDEX

- 1. Primary references with standard page numbers: Income, 9, 122, 178
- 2. Head and subhead references with page numbers and ranges: Income

adjusted gross, 10, 123-125, 180 gross, 9-10, 122, 178-179

- 3. Chapter (numeric) and page: Income, 1-9, 5-22, 6-78
- 4. Chapter (alphabetic) and page: Income, A-9, E-22, F-78
- 5. Absolute line references:
  Adjusted gross income, 1202-1210, 2202
- 6. Page and line references with multiple references per page: Income, 31:3, 31:10, 31:22, 45:14, 48:7, 48:13

HENRY F. BEECHHOLD is a contributing editor for HOME-OFFICE COMPUTING.

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the point. So "humor" should be indexed, along with other words associated directly with humor—for example, "parody" and "satire," which appear in the same section. A zealous indexer might be tempted to include the entry "secret weapon" under the general heading "humor," thus:

Humor secret weapon

Adjectival entries of this type are common and may be useful. However, in the present context, "humor" says enough—namely, to give the reader a few insights into the purpose of using wit in his or her writing. In a book about comedy, however, we can see why a proper index would include many adjectival entries under the word "humor." Therefore, it's not only the immediate context (the chapter or the section), but the global context (the entire work) that must be considered when selecting words for indexing.

#### **HOW TO ARRANGE AN INDEX**

In some situations, phrases are appropriate entries. Contrast these index entries from a hypothetical spreadsheet manual:

#### [Example 1]

Changing size of a cell Changing size of a window Deleting, etc. Moving, etc.

#### [Example 2]

Cell
changing size of
deleting contents
moving contents
Window
changing size of
deleting
moving

Each approach offers value to the reader. A large manual covering a complex topic should include both types. If a reader is thinking "changing size," he or she will find information under that phrase. If the mindset is "window" or "cell," no problem either. You must anticipate the way readers are likely to think about the items you index.

You should also include a page number for every *informative* mention of a referenced term. Hence, there might be a hundred occurrences of the word "cursor," but perhaps only 10 would be considered helpful to a reader in search of information on the subject.

There are add-on indexing programs, such as *Proindex* (discussed below), that work with any word processor and can create several index styles. The style you choose will be governed by the type of document

#### Put yourself in the reader's place, and be guided by a combination of empathy with the reader and your special understanding of the material being indexed.

(see figure on p.22). Clearly, absolute line references (Example 5) can be helpful for program listings and poetry, but probably not for a business report. The most generally useful is the head/subhead type (Example 2); the chapter/page methods (Examples 3 and 4) work well in instruction manuals, for instance.

#### **INDEXING WITHOUT AN INDEXER**

There are two basic ways to collect your list of index keywords and phrases. One is to read the text and mark the words as you go. The other is to reduce the original document file to an alphabetized list of words from which you make choices. The second approach requires a sorting program (several shareware and public domain programs can sort all the words in a text file). The sorted version of the document will have to be edited with your word processor to turn it into a suitable list, one with the irrelevant words removed. Then you'll have to search your original document for each use of words you want to index.

You can build your own index by (1) printing a draft of the document, either to disk or paper; (2) reading the draft carefully for every phrase and word you want to index; (3) noting the page numbers on which each of these words or phrases occurs; (4) word processing a list of the words and phrases with page numbers included—the index itself; and (5) saving this as an ASCII text file. The list can be alphabetized with the MS-DOS Sort utility or any similar program. Perform the sort, edit it with your word processor (if necessary), and print it out.

Nothing fancy here, but it works. If you expect to do a lot of indexing, however, it will pay to buy an indexing program, such as *Proindex*.

#### **INDEXING WITH AN ADD-ON INDEXER**

Proindex, a \$90 MS-DOS program (Elfring Consulting, Inc., [312] 377-3520), contains all the tools needed to make a professional-looking index. To create the raw list of keywords, Proindex provides two utilities, Makeword and Remove. Makeword reduces your document to a list of unique words. Remove compares that list to a supplied stock list called Common (which you can edit if you wish) and strips out the common words (the grammatical ''glue'' of

the language: articles, prepositions, conjunctions, and the like) plus any other words you wish to get rid of automatically.

You can then fine tune the Makeword file with a word processor that accepts an ASCII file—most do. Fine-tuning includes stripping out references that are not common words (such as "weapon" in the earlier example) and expanding certain words into families of phrases ("moving" becomes "moving blocks," "moving sentences," "moving words," etc.). You also might need to reduce keywords to their root element in order to help Proindex locate all references to the word, regardless of how it's thus captures used ("calculat" "calculates," "calculating," and "calculation").

Next, run the document file through your word processor's print-to-disk routine, which results in a disk file paginated as though it had been printed to paper. Without an indication of page breaks, *Proindex* cannot provide page references for your keywords. In case your word processor cannot print to disk, print the file to paper to determine where page breaks occur, then add an arbitrary symbol (perhaps an @) at these points in the original document file.

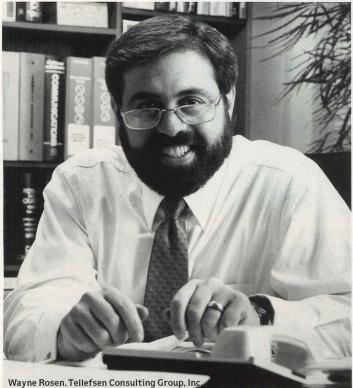
In either instance, you merely tell *Proindex* what symbol to look for and it establishes page references either automatically or by asking you a series of questions. For legal, academic, and scientific documents, the automatic mode may be the better choice because it makes exact matches only—matches you have provided in the keyword file. For other documents, the interactive mode is more appropriate because you decide whether you wish to match a particular reference to a particular keyword.

When the index is complete, *Proindex* saves it as a new file. Since this is pure ASCII text, it can be easily modified.

#### **INDEXING, THE LAST WORD**

Irrespective of how you index documents, with or without software, the value of your index depends on the quality of your key terms. The computer is merely a robot; you must do the thinking. Put yourself in the reader's place, and be guided by a combination of empathy with the reader and your special understanding of the material.

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## Hot New Features Of Ventura Publisher 2.0

BY STEVE MORGENSTERN

#### Previewing the Popular MS-DOS Desktop Publishing Program In Its First Major Upgrade

For my money, *Ventura Publisher* is more than the leading MS-DOS desktop publishing (DTP) program. With both a Macintosh and an IBM clone at my disposal, and all the leading DTP programs for both machines, *Ventura* remains my meat-and-potatoes choice.

There are many reasons for my choice too many to cover in depth here. In a nutshell, Ventura provides exceptional typographic control. It also lets me place text and graphic elements by a combination of moving those elements with a mouse and entering figures in dialog boxes. This lets me lay out pages quickly with eyeball and mouse, then check and refine the positioning with mathematically precise placement. The program also works more quickly than most DTP software, nearly eliminating the annoying delays of other programs struggling to catch up with your latest changes. Whether you already use another package for DTP or are looking to enter the field, you'll want to know the news about Ventura Publisher. version 2.0.

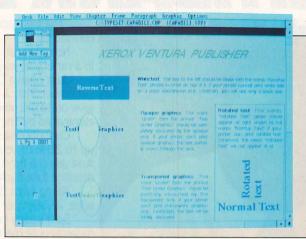
#### THE THREE MODULES OF VENTURA 2.0

My pleasant task this month is to preview the new *Ventura*—version 2.0—which will be on sale by the time you read this.

In this first major upgrade since the program's introduction, Xerox segments *Ventura's* features into three separate modules. There is the basic updated program, *Ventura Publisher* 2.0, with a list price of \$895. Then there's the Professional Extension, providing a small but significant group of add-on features for an additional \$595. A third enhancement is designed to let networked groups work together on *Ventura* projects (sold only with version 2.0 for \$1,295).

After working with a beta (prerelease) copy of *Ventura* 2.0 with the Professional Extension, I am impressed with the enhancements. The publisher hasn't cleared out all

STEVE MORGENSTERN is a contributing editor for HOME-OFFICE COMPUTING.



The ability to rotate text (right side) is one of the welcome new features in version 2.0 of Xerox's popular Ventura Publisher.

the entries on my *Ventura* wish list—not by a long shot. But these new features add significant capabilities to the program.

#### DON'T MESS WITH SUCCESS: THE NEW FEATURES

The basic operation of *Ventura* hasn't changed. There have been a few modifications to the pull-down menus and dialog boxes, resulting in a slightly more logical organization. But seasoned *Ventura* users won't feel the earth move under their fingertips.

Ease of use has always been an issue with *Ventura*; the level of page-layout control provided here inevitably carries with it a certain degree of complexity, and the learning curve is relatively steep. The only improvement in this regard is the addition of an excellent online help system. Every time there's a dialog box on screen, there's a question mark you can click on to call up a terse but valuable help screen.

With the essentials about the same, we can evaluate the basic version 2.0—and then the Professional Extension—shopping-list style. How has it been enhanced, and what will it now do for you?

**Color.** Ventura now supports spot color (color used here and there on a small proportion of the page) and shades of gray. It's easy to apply these characteristics to text, rules, and graphics. You can print in color on a PostScript printer such as the QMS Colorscript or print separate black-and-white pages for each individual color you use in your layout (to be used by a commercial printer in preparing printing plates).

Scanner Support. Ventura now accepts

scanned images in standard grayscale TIFF format. You still don't get the control over brightness and contrast provided by *Page-Maker* or Quark *XPress*, but the TIFF images do print well from *Ventura*.

**Text Rotation.** This is an unusual and very welcome feature for any DTP program. You can now combine horizontal and vertical type on a single page—great for creating coupons and tables, for example. Unfortunately, Hewlett-Packard Laserjets won't support this combination, but PostScript printers do.

Jump-To Text Continuations. Ventura has always let you jump instantly to a specified page number. Now you can automatically jump to the page where a particular text block continues—very helpful in a magazine or newsletter layout where articles may span several noncontiguous pages.

**Style-Sheet Printouts.** Style sheets are a strength of *Ventura*. You name a type style—such as Heading or Caption—and define a full range of characteristics for it, including font and spacing information. By assigning these styles to your text you can quickly format your pages and rapidly make publication-wide typographic changes. What version 2.0 adds is the ability to print out complete summaries of your style sheets, which is very handy when you need to keep track of complex type specifications or want to use an existing style sheet for a new publication.

Improved Mode Selection. Ventura works in four basic modes: text, graphics (for creating boxes, circles, etc.), frames (boxes that hold text or graphics), and paragraphs (for assigning type styles). Until now, you've had to switch modes frequently while editing your publication. For example, when alter-

into frame mode to select each graphic, then back to graphics mode to make the changes. Version 2.0 makes most of these time-consuming mode jumps unnecessary.

Typographically Correct Fractions. Have you ever tried to construct a properly typeset fraction by using smaller typefaces, superscripts, and subscripts? It's a horrendous job. Ventura 2.0 takes the burden off your hands by automatically creating typographically correct fractions. You can set the numerator directly above the denominator or place them side by side with a slash in between.

Repeating Graphics. In addition to text that repeats on each page of your layout (running heads, for example), you can now specify repeating graphic images. This is useful if, for instance, you want to place a company logo on every page.

Automatic Backup Files. You now have the option of having the program automatically create a backup copy of your publication file whenever you save the original.

#### **VENTURA'S PROFESSIONAL EXTENSION**

With one significant exception, the exclusive features incorporated in the Professional Extension are true specialty tools. Most desktop publishers will never miss them, but if you work on very lengthy or highly technical publications, the Professional Extension could be a dream come true.

Table Creation. The time-consuming, head-scratching task of creating tables has been significantly streamlined here. You create a basic table grid by entering information in a dialog box, then enter text in the table cells and customize them to your heart's content.

Equations. You can create even highly complex equations using an interactive editing capability. You enter commands in one window, and the resulting equation graphic appears on-screen. When you have it just right, just pop it into your page layout.

Cross Referencing. An elegant timesaver. Want to create references to text, chapter numbers, or figures located elsewhere in your document? Need "continued on . . . " and "continued from . . . " notations in your publication? Ventura will now create them for you and update them automatically as the layout changes.

EMS Memory Support. If you're working on long documents, support of the Expanded Memory Specification (EMS) is essential. The Professional Extension will take advantage of extended memory in your computer, keeping complex publications in memory and avoiding time-consuming swaps to the hard disk.

Vertical Justification. This is the one major feature in the Professional Extension I would have liked to see in the basic product. Vertical justification will automatically expand

ing several graphics, you might have to jump the spacing in a column so the last line exactly hits the bottom of the page. This is a true "professional" feature that can eliminate the slightly ragged bottom edge that's a common failing in desktop-published documents. It will certainly save me a lot of time and effort from now on.

#### PRODUCT NEWS **AND NOTES**

Design Shortcut. Wondering what typefaces mix together harmoniously? Adobe Systems ([415] 961-4400) has some suggestions. It asked well-known designers in three key DTP areas-newsletters, forms, and pre-

sentations—to recommend a set of fonts for each. The result: Adobe's Publishing Pack series. The Newsletter package includes Century Old Style, Galliard, and Franklin Gothic in a variety of weights. Forms and Schedules consists of Lucida, News Gothic, and Univers. For Presentations it's Lubalin Graph, Helvetica Condensed, and New Baskerville. These packages of PostScript fonts, available in both Macintosh and MS-DOS formats, sell for \$475 each (\$395 for the Newsletter version), and represent a carefully thought-out approach to expanding your type alternatives when you're ready to move beyond the faces built into your printer.

#### We all must pay taxes . . even Melissa.

So she gave her dad Tax Shop 1040 TM. Melissa chose Tax Shop 1040 because it's a comprehensive income tax return preparation software package that is fast, accurate, and easy to use. Tax Shop uses scrollable input screens that resemble actual tax forms to give it the speed demanded by tax professionals like her dad. It supports; 4 print options (including laser); most states; and over 30 forms and schedules, including Form 8615 for Melissa.

Special Features: Tax Shop 1040 also contains its own Calculator, Notepad, Loan Amortization module, Tax Planner, and other features not found in most tax software.

No Locks or Limits: Tax Shop 1040 is not copy protected and does not limit the number of tax returns that may be prepared.

And Melissa was able to use her dad's credit card to order.



## Phone Programs Yield Instant Recall of Any Conversation

BY CHARLES BERMANT

#### **A Survey of Five Databases** For Organizing and Logging **Phone Calls**

There must be some way to control and track the deluge of incoming and outgoing calls each day. As the nerve center for many home-based businesses, the phone generates questions that range from "Whom did I talk to, and about what?" to the more consequential "Who should pay for this call, and how much?'

These are just a few of the problems that a comprehensive telephone database program can solve. By integrating your telephone's functions with your computer, phone database packages (which are typically memoryresident) truly enhance your operations. For example, while my intermittent freelance business is usually profitable, I used to lose money on phone calls. Clients want a specific itemization of calls made and time spent, things I was too lazy or disorganized to maintain. An hourly estimation was unsatisfactory. And by the time the Bible-size phone bills arrived, invoices had already gone out without an easy way to determine whom to bill for each call. I ended up paying the entire amount myself.

Now, if you use a phone database, calls logged to a particular client—including time, date, and duration—are easy to call up and print out. Match this to the client's invoice and later to your phone bill, and the program,

proverbially, pays for itself.

Consider another problem of the active, absentminded, self-employed professional. While attending a trade show, conference, or seminar, you're likely to gather handfuls of business cards. Typing name, phone number, and a category into the database yields instant recall of every contact (I sort my contacts as Media, PR, Hardware, Software, Analyst, or F for friend). It doesn't matter if the person seems insignificant or uninteresting; this permanent record takes virtually no space, and it provides space to log subse-

RETURN DAVES CALL

quent phone calls with that contact. This also provides an answer to that law of business cards: anything thrown away will become crucial in three weeks.

#### SOFTWARE SOLUTIONS FOR **CONTROLLING THE PHONE**

The available products differ enough that there is no single solution. In its original incarnation, SideKick was a Swiss army

#### **TELEPHONE DATABASES**

Focal Point v1.0 (\$100). Mediagenic/TENpoint0, (415) 329-0500. Requires: 1MB Macintosh; HyperCard; hard-disk drive.

Hot Line Two v2.0 (\$99; \$50 per InfoPack). General Information, Inc., (206) 828-4777. Requires: 256K IBM PC, PS/2; two drives.

**Prodex** v1.6 (\$90). Prodex Development Company, (206) 527-2898. Requires: 256K IBM PC, PS/2; two drives.

QuickDex v1.4a (\$60). Casady and Greene Inc., (408) 624-8716. Requires: 512K Macintosh; two drives recommended.

SideKick Plus v1.0 (\$200). Borland International, (408) 438-8400. Requires: 384K IBM PC, PS/2; hard-disk drive.

knife of software utilities, including a phone dialer but no other telephone-related functions. For the upgrade, SideKick Plus, the publisher has sensed that users want more than just dialing—they want to manipulate and catalog information gathered by phone so SideKick's phone capacity now offers far more than a dialer. First, you can easily input the kind of data gathered in any phone-intensive work: name, address, telex, and fax number. There's even a slot to remind you of the name of someone's spouse, child, or dog. Separate phone books can be built for different projects, with the ability to export or erase the numbers when the task is done.

Most significant, a hierarchical facility allows you to dial a stored number, then take notes on the conversation, so that a representation of the conversation's substance is tied to the directory listing, with multiple conversations potentially tied to a single listing.

SideKick's phone facility is only one part of the program's features—it also includes a calendar, calculator, outliner, and more. A different (and for many a more useful) integration style comes from *Prodex*, which combines a similar collapsible note-taking

CHARLES BERMANT, a freelance computer writer, lives in Oregon.

You don't need a lot of experience either. Because

charts. And you'll get them with more fonts and

only PFS: First Graphics gives you so many charting options in such an easy to use package. And at such an easy to live with price. You'll get direct read of your Lotus files for faster generation of pie charts, bar charts and text



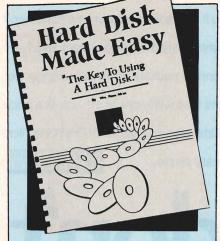
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#### DATABASES

feature with a to-do list, log, and calendar. *Prodex* is an impressive telephone sales tool and is the smoothest way to track projects and contacts. Each of its four directoriesphone, to-do, calendar and log-attaches a folder to each name. All folder entries can be time- and date-stamped at a keystroke. Prodex could be more intuitive, as its subtleties aren't that easy to figure out. Still, it lets you describe the same phone call four different ways, providing a precise way to track your phone time.

#### **ON-LINE TELEPHONE REFERENCE**

Yet another view of phone/computer integration comes from General Information's Hot Line Two, which adds a reference dimension but subtracts the note-taking capability. In addition to including the 10,000number National Directory of telephone numbers-which offers an assortment of phone numbers, such as hotels, airlines, car rentals, media, and industry—the company sells three different software phone lists (called "InfoPacks") for travel, high tech, and advertising/media contacts. Addresses are also included. You can add your own numbers to any of these databases.

Bringing several thousand numbers within a keystroke's reach is both cheaper and more thorough than using costly directory assistance. The weather in Albuquerque, for instance, is only a keystroke away, along with the local hotels and radio stations. All of Hot Line's databases are upgraded annually for a nominal cost to registered users.

Hot Line Two also includes several ingenious features. One is keypad dialing, which lets you dial using your computer keyboard's numeric keypad; another is a point-and-press cursor motion that lets you highlight any phone number in any file in any program, and dial it with a keystroke. Hot Line even makes a telephone superfluous; simply plug a phone headset into the back of your modem. (This is how I usually talk on the telephone.) You still need a regular phone to hear your line ring, but a headset (available in stores such as Radio Shack) includes both headphones for listening and a small, built-in microphone for speaking, leaving your hands free for the keyboard.

Hot Line has limitations—it logs but cannot annotate calls as do SideKick Plus and Prodex. Still, its reference abilities and software extras make it the perfect secondary phone utility, for use in conjunction with either of those other two programs.

#### **PHONING WITH A MACINTOSH**

Macintosh users have their own options. HyperCard, bundled as part of the Mac's operating system, can catalog calls through its time-management functions. To go a step further, Focal Point (a set of HyperCard stacks, or applications, from TENpoint0)

modifies HyperCard, for a full-featured phone calling solution. HyperCard specifics aside, Focal Point includes a host of useful ideas for managing phone calls that bear imitation by MS-DOS programs. Calls can be logged as either incoming or outgoing, with easy input (a single mouse click) of standard responses such as "busy" or "left message." Focal Point is now bundled with Business Class, an international travel planner that includes a database.

The best idea for the Mac is QuickDex, a desk accessory program that uses the card

A phone database package can help you manage details, stay organized, and gain the competitive edge by combining the flow of people with the data that flows through your computer.

motif without HyperCard's substantial memory and disk requirements. The cards have no preset structure, and you can enter data in any form. This allows you to search from all directions, finding the name of either Dave's dog or Spot's man with the same ease.

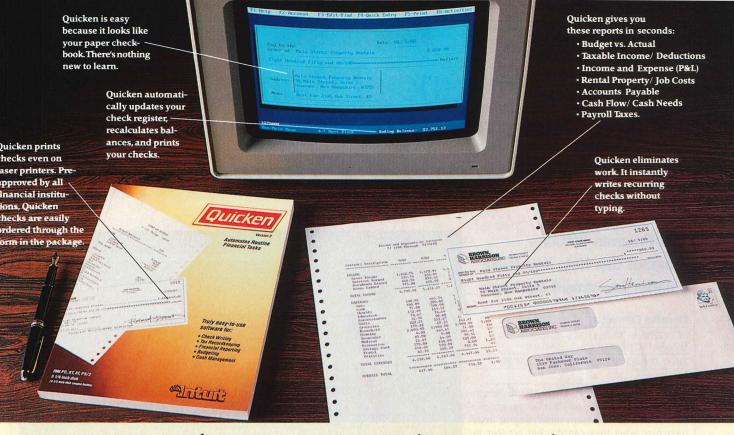
Like Hot Line Two, QuickDex can dial a number out of any file and, according to the publisher, it can even place calls by playing a phone number's "tones" out of the Mac's speaker into the telephone receiver, so that you don't need a modem. Unfortunately, it lacks the automatic call-logging feature.

Although Mac and MS-DOS programs have roughly the same ability, the Mac boasts a significant advantage with its mouse integration. All the IBM-compatible programs are character-based, so you can't dial a number or log a call with a point-and-click motion. MS-DOS users will probably have to wait for the establishment of OS/2's Presentation Manager or a good Windows-based utility to achieve a more intuitive level of PC/ phone integration.

#### THE EDGE

Small businesses often succeed or fail on the ability to manage personal contacts. By combining the flow of people with the data that flows through your computer, one of these software packages can help you manage details, stay organized, and gain the competitive edge. ■

Murphys, CA 95247



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# Financial Planning Made Easy with Andrew Tobias's Financial Calculator

#### **BY KENNY DENNARD**

675

#### This Program Within a **Program Can Help You Make Smarter Investment Decisions**

#### **Financial Calculator**

PUBLISHER: MECA, 355 Riverside Ave., Westport, CT 06880; (203) 226-2400

SYSTEM REQUIREMENTS: 256K IBM PC

PRICE: \$45

I'm a software pack rat. I love the challenge and adventure of exploring new programs, but too often I find them interesting at first, recognize what they can do, but get lost in poor documentation and lousy help screens. Sure, I read and muddle through, but my enthusiasm soon wanes. As a result, I have nearly 40 programs collecting dust or. waiting to be taken off my hard-disk drive.

Andrew Tobias's Financial Calculator came as a welcome change. Accounting and financial programs are hard for many of us to grasp, but not this one; Financial Calculator inspires you to analyze, project, and play with the dollar figures that are critical to your business and your life, and it's written for people, not gear-heads. The program is actually part of a larger program—Andrew Tobias's Managing Your Money—but may be purchased separately for \$45.

#### PAINT YOUR FINANCIAL PICTURE

The Financial Calculator gives you the tools and the practical knowledge to handle compound-interest calculations, retirement planning, college planning, investments, rental property, mortgage refinancing, buy/ rent/lease decisions, loan analysis, and depreciation scenarios. It also contains a Form 1040 screen that is useful for estimating your tax liability.

You can play "what-ifs" to your heart's content. An accountant's or banker's mentality isn't needed. If you get confused or don't understand a specific screen, hit a key and a help screen comes to the rescue.

KENNY DENNARD is marketing director for his family's home-based international consulting business. Dennard Associates International, located in King, North Carolina, was profiled in the September 1988 issue of HOME-OFFICE COMPUTING.

\* FIMANCIAL CALCULATOR/College Planning Results \* YEARLY ADDITION NECCESARY: \$5,293.91 This is what you'd have to add to your savings each year so that by the time college started you'd have just enough to cover your costs without adding any more. ALTERNATE YEARLY ADDITION: \$4,064.93 This lower amount assumes that you won't stop saving for college the year it starts, but that, instead, you continue paying in the same amount during each of the college years. ANOTHER ALTERNATIVE: \$2,995.12 This even lower amount assumes, in addition, that you START setting aside \$2,995.12, but that as college costs go up over the years, so will your income and ability to set money aside. So here we assume you'll be increasing your annual savings rate at 5%, the same inflation rate you assumed for college costs. But beware: this is obviously the least conservative approach, and the one that benefits least from the power of compound interest. The MOSI CONSERVATIVE approach, if you could afford it, would be simply to set aside another \$42,938.32 today. Based on your assumptions, you'd never have to lay out another penny for your child's college education.

F1 - Print report

F9 - Back up Press ExCape for Help FIG - HINI HENU

6:10:50a

Financial Calculator can outline alternative savings plans for covering the escalating costs of a college education.

If you, like many home-based business owners, do not do pension or retirement planning, a few screens in the Financial Calculator can help you decide whether to contribute to a retirement plan like an IRA, Keogh, or Deferred Annuity. Answer simple questions, press a key, and an evaluation of your situation is displayed. Even if you don't use the information, you understand more about financial and retirement planning.

Probably the scariest section in the Financial Calculator is College Planning. Let's say you want to get a handle on the realities of higher education costs. When you run through some simple questions and press a key, your jaw may hit the floor at the sight of what it will cost to put Junior through four years at Duke in 1997. Never fear. Press another key and the Financial Calculator will propose a couple of financial options for how you can save for your child's tuition. (I say promise him a new car if he wins a full scholarship!). If college tuition doesn't loom in your future, you can adapt this section to find out how much you will need to set aside for that trip around the world or the boat of your dreams.

Investment Analysis, Rental Property Analysis, Mortgage Refinancing, and Buy/ Lease/Rent Comparisons are sections that can help decision-makers calculate rates of return, after-tax cash flows, and timelines for buying, selling, and leasing properties. Okay, you may not own your own city block, high rise, or have other investments beyond what you've poured into your home business. These tools can still help you gain solid investment knowledge and skills for when you do reach your financial goals.

The Financial Calculator is a powerful little program unto itself. The makers of the product are marketing this package (the Financial Calculator with a demo disk of Managing Your Money) with the hope that you will see how simple financial planning can be without a large investment. The company has also included a \$10 discount coupon as another incentive for you to purchase the parent package, Managing Your Money. Financial Calculator is well worth a try. If you don't like it, you're not out much money. But if you're like me, you will find it useful enough to inspire a purchase of the larger package.



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## Government Bulletin Boards

#### BY MAX LENT

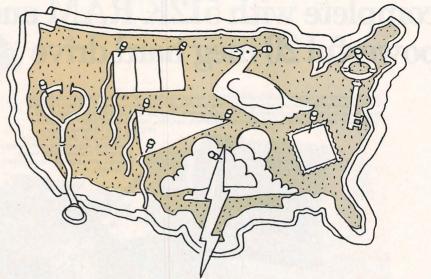
#### **Get Information Electronically from Government Agencies**

If you need information from a government agency but dread facing the red tape that binds many bureaucracies, you might find your answers—and sidestep the frustrationby going on-line.

Many federal, state, and city government agencies have installed electronic bulletin board systems (BBSs) to economically disseminate information to the public. The National Weather Service, Census Bureau, NASA, National Science Foundation, and Department of Commerce are just a few of the agencies that you can find on-line. Some of these systems simply post information that you can read, while others maintain files containing long lists of statistics, agency news, or detailed reports that you can download. Whether you're looking for business leads or raw data, these BBSs can be a tremendous resource.

#### THE VARIETY OF TOPICS

If you travel, or if your business depends on weather or climatic variations, check into the National Weather Service and the National Oceanic and Atmospheric Administration's Meteorological Center databases, which include meteorological data collected from locations throughout the world, temperature and precipitation maps, and forecasts. If you need information on science research grants, The National Science Foundation's Science Resources Studies BBS could help you. Or, you might compile a list of foreign companies interested in starting up or increasing their import or export business through the Department of Commerce's Economic Bulletin Board. These U.S. government agencies prefer that you contact them by modem rather than letter or telephone



because it saves them time and money. In many cases, the information you need has already been requested by someone else, probably hundreds or thousands of times before. The job of regurgitating the same statistic or address over and over again is tedious and time consuming and wastes taxpayers' money. By posting commonly requested information on 24-hour bulletin boards, thousands of redundant letter and telephone responses are eliminated, and the office staff is free to devote more time to unique queries.

Not all government BBSs contain huge databases or tables of numbers. Some, like New Jersey's Farmer's Market Line, can be used to find farmers with produce, livestock, and equipment to sell. You might use this system—if you live in or near New Jersey to find farmers with ripe berries to pick or ducks for sale.

#### **ELECTRONIC CITIES POST COMMUNITY AFFAIRS**

Cleveland and Youngstown, Ohio, have community-oriented Free-Net bulletin board systems that provide residents with a wealth of local news and a means to communicate. Not only do these residents converse with one another, they also consult with physicians, psychologists, dentists, teachers, and other professionals. These communitybased BBSs are like "electronic cities," says Tom Grundner, founder of the Cleveland Free-Net. Instead of the usual bulletin board menu selections of files or messages, Free-Net users choose from selections like post office, administration building, schoolhouse, university circle, courthouse, hospital, and government house. Tom Grundner's approach to on-line information sharing may spread to other cities and become the model for electronic cities of the future.

The future of government on-line information systems has fantastic potential, but it is still in its infancy. We need a broader range of topics to choose from, a more standardized system, and a central index. Ensuring that you have access to more information is up to you. If you want it, ask for it. And if it's already available, let the agencies that provide the information know you appreciate their efforts. If we encourage them, in a few years we may be able to use computers, modems, and telephones to access nearly every kind of non-classified government data.

For a list of government bulletin board systems check Data Library 10 in the Working From Home Forum on CompuServe (GO WORK). The file GOVT.BBS was compiled by Max Lent.

MAX LENT, a freelance writer and

#### TIPS FOR ACCESSING A GOVERNMENT BBS

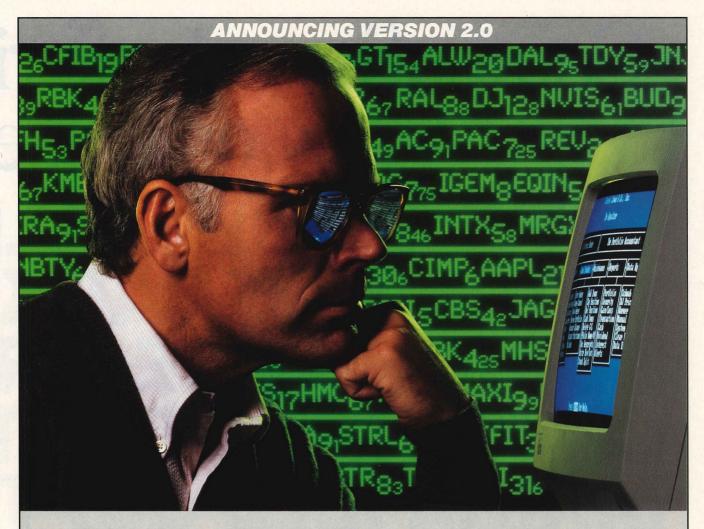
There is so much government and commercial online information available from so many different sources that inexperienced users of fee-based services can run up tremendous bills just learning how to use a system. You may choose to hire an information broker to collect the data you need, but here are a few tips if you decide to go it alone.

You can research government databases by calling the BBSs directly or through on-line services like DIALOG, CompuServe, and others. All you need is a computer, modem, communications software, and telephone. Any type of computer will do, but, since nearly all government BBSs use MS-DOS systems, most of the public-domain software available for downloading is DOS-compatible. The modem you use can run at speeds of 300, 1200, or 2400 baud, but BBSs that operate at 1200 and 2400 baud are the most common.

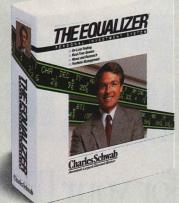
When you are getting ready to call one of the government BBSs, set your telecommunications software to operate at no parity, 8 bits, 1 stop bit, and full duplex. You may see these settings abbreviated as N-8-1 F.

If you have never called a BBS before, you may want to experiment with a local BBS first. Many of the government services are in the Washington, D.C., area. Calling these numbers long-distance to practice using the BBS software could be costly.

photographer, works out of a home office in Rochester, New York. He communicates with most of his clients via modem.



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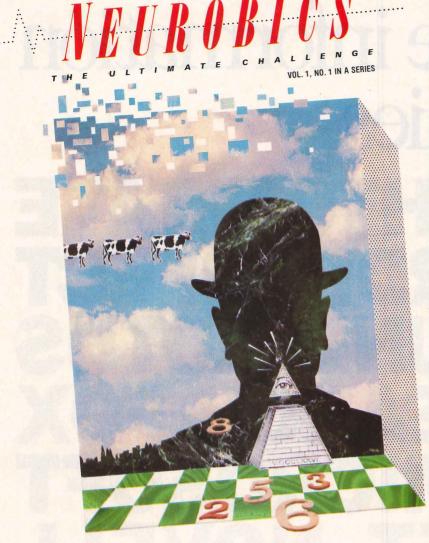
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### How to Choose a Personal Copier

BY ROBERT CALEM

#### A Roundup of Features to Help You Make The Right Choice

Operating a personal copier requires four steps, sort of like the fox-trot: (1) Lift the cover, (2) place the paper face down on the glass. (3) close the cover, and (4) push the button. Most personal copiers work similarly, moving at about the same speed (4 to 8 copies per minute) and offering the same basic features. But some copiers offer special features. If you're going to be making copies occasionally, you'll manage with a low-end machine with basic features. If you'll be making copies frequently or in bulk, consider a high-end model with such features as automatic feed, reducing and enlarging, and variable paper cassette tray sizes. Then once you know what moves you want from a copier. like a choreographer you should audition a few before you make a final selection.

#### **FANCY STEPS**

Most personal copiers employ an 8.5-by-11-inch paper storage cassette, and some models also accommodate legal-size paper (8.5-by-14 inches) and business cards. Unlike copiers installed in corporate offices, most personal copiers don't have automatic-feed mechanisms. So if you need to copy many pages, you'll have to place each page to be copied over the platen (the glass window) and then manually remove it. Paper storage cassettes can accommodate from 50 to 100 sheets.

Snazzy features—such as the ability to make multiple copies, copy from a book, and reduce and enlarge—are all costly. Some models have built-in editing capabilities that let you delete confidential information or highlight sections of a document in a second color. To jazz up copy, some copiers can use color cartridges and print in one color other than black—red, green, blue, or brown—to enhance graphs, charts, invitations, or brochures.

If your home office is in cramped quarters, a stationary platen may be important. Most

Clockwise from top: The Panasonic Apogee/1 can print images from your television, VCR, or computer; the Sharp Z-30 weighs less than 25 pounds and feautures a convenient carrying handle; the Ricoh LR-1 incorporates a 50-sheet paper-storage cassette and produces five copies per minute.

personal copier platens move from side to cartridge that may contain two of the the side over a motionless scanning device built alements. The Sharp Z-70 and the Years a motionless scanning device built alements.

personal copier platens move from side to side over a motionless scanning device built into the copier. A stationary platen remains motionless while the internal scanning device moves.

#### **KEEPING IN SHAPE**

Copiers don't need much maintenance to stay fit. You'll need to change the cartridge, unclog paper jams, and keep paper stocked, but that's about it. Choose a copier with a clear and simple control panel that will give you error messages and point you in the right direction, should you need to troubleshoot.

Most units use replaceable cartridge systems based on a technology developed and patented by Canon. Canon machines and some competitive models licensed by Canon, such as the Ricoh LR-1, utilize a cartridge that contains toner, drum, and developer—the parts that can run out or wear out—all in one unit. Other copiers incorporate a similar

cartridge that may contain two of the three elements. The Sharp Z-70 and the Xerox 5008 R/E use a toner-and-drum cartridge system. Cartridges, like printer ribbons, have different lifespans. Some last for only 1,500 pages of copy; others last for 3,000 to 4,000 pages.

#### THE FINAL SELECTION

The best way to audition copiers is to bring a sample document to the store and try out a few machines. What do you have to pay for the performance you want from a copier? Suggested list prices generally range between \$800 and \$1,600, but you can find discounts as high as 40 percent. You'll find that the quality of the copy varies from machine to machine and company to company. For some shoppers, brand recognition and dependability are factors to bank on. And as always, find out about warranty and service contracts.

ROBERT CALEM, a freelance writer, was formerly executive editor of Home-Office Electronics. He wrote "How to Choose a Facsimile Machine" in our October issue.

## A True Story About the Power of Belief

#### BY SARAH & PAUL EDWARDS



Sometimes making a business succeed seems only slightly less difficult than scaling Mt. Everest. We know that feeling. One fellow opencollar worker told us, "When your bank ac-

count's empty, and the phone is so quiet you think you're the Maytag repairman, and the bills pile up on your desk, you wonder— 'What am I doing?' 'The following true tale has helped us get through such moments.

The scene is a railroad yard at night. A freight-yard inspector had to check a refrigerator car to complete his rounds. This inspector disliked the cold, and hated checking refrigerator cars.

Once inside the car, the inspector was horrified to hear the door slide shut behind him. Immediately he ran to the door and frantically began pounding on it, shouting for someone to let him out. Finally exhausted, he gave up, realizing there was no one around to hear him.

Knowing that he could not survive the night, he left notes on the wall of the car. His first message read, "It's cold in here and getting colder." A second message read, "It's colder still." A third message said "It's so cold in here, my fingers are almost too numb to write." His last message read, "These are my last words."

The next morning, the car was opened, and the inspector's body was found. The man was dead but he had not frozen to death. The temperature inside the refrigerator car was 56 degrees—the refrigeration equipment on this car was broken!

What a testimony to the power of belief! This story first appeared in a newspaper, and we heard it from motivational speaker Pam Lontos on her audiotape, "Program Yourself for Success in 30 Days" (Lontos Sales & Motivation, Inc., P.O. Box 1127, Thousand Oaks, CA 91360.)

From Housewife to VP to Business Owner. Lontos is one to know how optimism works. In just a few years she went from being a

PAUL & SARAH EDWARDS are the authors of Working from Home, Everything You Need to Know to Live and Work Under One Roof (Jeremy P. Tarcher, 1987). They co-host the radio program "Wake Up to Success!" in Los Angeles. Contact them on the Working from Home Forum on CompuServe.

depressed, overweight, reclusive housewife who could barely make ends meet to a leading radio saleswoman and vice president of a large radio network. Now, as head of her own home-based company, she is a nationally recognized speaker and media personality. She tells her own inspiring story in her book Don't Tell Me It's Impossible Until After I've Already Done It (\$14; William Morrow,

The Power of Positive Thinking. If the railroad tale indicates the power of negative thinking, a variety of studies over the last several years support the power of positive thinking. In fact, a new study from Niagara

The scene: a railroad vard at night. A freight vard inspector who hates the cold has to check a refrigerator car. Once inside, he hears the door shutting behind him ...

University reflects the changing view of what constitutes a healthy mental perception of reality.

The classical belief has been that facing life with a clear perception of reality is healthy. However this study, and other research at the Universities of Pennsylvania and Oregon, shows that depressed people often have more "realistic" perceptions. Nondepressed people, on the other hand, possess slightly distorted perceptions of reality. The distortions favor optimism and exaggerate the subjects' sense of their own ability to control events, blocking unhealthy depression and encouraging persistence.

Warren Bennis, a leading authority on organizational behavior and author of Leaders (\$20; Harper & Row, 1985), calls this ability to distort reality "unwarranted optimism" and found it to be one of several characteristic traits of outstanding leaders. We've taken this information to heart and remind each other to be unwarrantedly optimistic if either of us sinks into despair over a problem.

30-Second Housecleaning. Keeping your household neat and clean becomes even more important when your residence doubles as an office. If you receive clients at home, they expect or at least are more comfortable in an orderly environment. Even if clients don't visit, keeping your home attractive can be a business survival skill.

But who has time for housecleaning? Hiring a cleaning service may be a solution, but sometimes that's not in the budget. So here's a housecleaning method we developed in self-defense—the Clean-As-You-Go method.

Instead of trying to squeeze out a three- or four-hour block of time for housecleaning once a week or a full hour at the end of the day when you're exhausted, take half a minute anytime you spot a mess and clean it up immediately. If your bookshelves are dusty, grab a cloth and wipe them off. If there are dirty spots on a bathroom mirror or wall, whisk them away before you leave.

For this to work you must have cleaning supplies at hand. In a three-story home like ours, there's no time to retrieve cleaning supplies from the first floor when you're on the third floor. In each area of our home we keep the following supplies: an all-purpose cleaner, a glass cleaner, paper towels, a dust cloth, and a sponge.

Writing Promotional Copy that Sells. If you work on your own it may seem that all tasks from housecleaning to writing proposals and sales letters fall to you, whether or not you have the requisite background and training. Over the years, we've spent long hours struggling against long odds to create sparkling copy for proposals, brochures, news releases, ads, and so forth.

Here's a book we wish we'd had then and are glad we have now: Words That Sell: The Thesaurus To Help You Promote Your Products, Services, and Ideas (\$10; Richard Bayan, Contemporary Books, Inc., 1984). Among other things, it provides a list of 37 ways to make contact, ranging from "We're looking forward to seeing you" to "Just fill out the order form." It offers wording for what it calls special situations, such as Justifying a High Price, Knocking the Competition, and Appealing for Contributions. The book is a perfect reference for copywriting because it's organized by sections that correspond to the natural progression of sales literature. out the order form." It offers wording for

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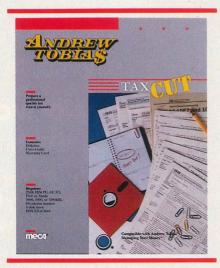
Tax Cut helps you know what financial decisions to make, and when to make them, for maximum tax savings. It eliminates the mathematical errors that can result in overpayment. It checks to see that you don't pay more FICA than you should (a common mistake). And most important, with Tax Cut there's no more need to spend significant amounts of money for professional quality tax preparation you can easily do yourself.

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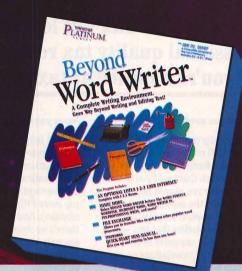
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features—for example, proportional spacing, and as many font styles as your printer supports—your documents become polished and professional.

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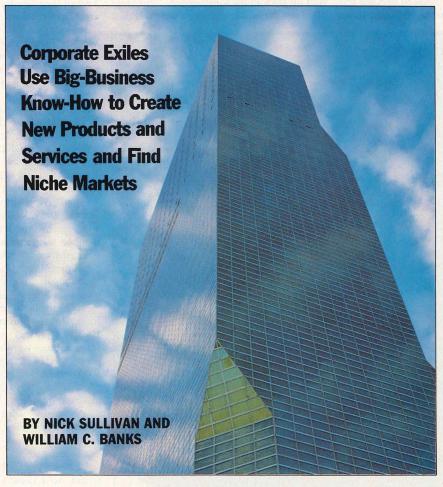
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## Life After the Corporation: Building a Business of Your Own



n 1983, after a career in high-tech management with Data General, General Electric, Motorola—and finally as president of Commodore International—James Finke was fired. For a few years, Finke was a fish out of water. Today, he is president of Interconsult, a three-person firm run from his home office in New Hampshire, with clients around the world. He is back in the water—and swimming downstream.

NICK SULLIVAN is a senior editor for HOME-OFFICE COMPUTING and WILLIAM C. BANKS is a freelance writer living in New York City. "I found that there aren't that many jobs for former presidents of New York Stock Exchange companies," says Finke, 61, who initially set out to find a position with another company. "The jobs were either too small, or unrelated to my skills. After a variety of consulting jobs, my self confidence grew, and I finally decided: Why confine myself?"

Finke's sharp career turn—from the hall-ways and board rooms of Fortune 500 firms to an office overlooking a salt marsh—is a story in itself (see "The Making of a Consultant"). His experience dramatizes the number and types of options facing today's corpo-

rate managers and professionals, many of whom are ready to accept the challenge of starting and running an independent business from their homes.

Now that computers, copiers, fax machines, and scores of other office products have made it feasible to run all manner of small-scale businesses from home, more professionals than ever are leaving large firms and succeeding on their own. All make use of their corporate skills in some fashion and generally start businesses that complement larger companies.

These professionals and managers are not

so much running from big companies as they are moving on to start value-added services that larger companies can't afford to produce in-house. Or they are selling to markets that big companies consider too small to be noteworthy. In short, corporate exiles are not rejecting their past; they are building on it. As home-business consultant Joanne Pratt says: "People may not realize it, but a big corporation can be a great business school. While you're there, learn all you can."

Some corporate exiles just take their job with them when they leave the corporation, then sell their services back to their former employer. Others transfer their corporate skills to a similar enterprise, but market them to a different audience. Some learn on the inside what kind of information a given industry needs, then go outside to find and sell that information. In almost all cases, those

who are successful have made plans, or at least have been "thinking" about their move for a long time. They focus on strengths, and neither early successes nor failures induce them to expand or fold too quickly.

Even so, a computer and a good notion may add up to just a wing and a prayer. Business basics are still essential: a sound plan, knowledge of your markets, and adequate startup capital. Almost all new business owners say that the startup process took more time and capital than anticipated. In describing their new lives, they use adjectives such as "risky" and "exhilarating" over and over again.

"In a corporation you can occasionally put yourself in a position to get a thrill," says Robert Moss, who left Chemical Bank to start his own ad-tracking service, "but more often the atmosphere tends to weigh against taking big risks. You might take a risk in the market, but not if it meant risking your career."

Says Richard Young, who runs an investment-newsletter business with his wife: "I think naiveté is the right word to describe me when I started out. I had high hopes, but let me tell you, if I knew then what I know now, I'd be scared ashen white." These are voices from the other side—those who have jumped from the plane and landed as successes.

#### **SELLING TO FORMER EMPLOYERS**

Bonnie Lewis Rodney, 35, is giddy with her new independence. BEAM Communications Inc., the company she started last September out of a home office she shares with her husband, has landed several big clients. Two of them are former employers—Exxon and Chemical Bank. Another is Sony.

Rodney worked in public relations at Western Electric for four years, and then in the same function at Exxon for more than five years. When Exxon moved from Manhattan to New Jersey, Rodney thought about going on her own. Instead, she took the lucrative "escape package," and moved on to become an assistant vice president and communications manager at Chemical Bank. She oversaw production of in-house audiovideo specials and newsletters and organized a national road show that Chemical puts on for its credit-card branch offices.

After giving birth to her second child in October 1987, Rodney worked at home with a fax machine on loan from Chemical, then returned to the bank three days a week. "I realized I wasn't going to get promoted as a part-timer," says Rodney. "But every time I talked about going on my own my husband would say, 'Get some clients first."

"Instead, I told my boss, co-workers, and friends I was 'thinking' of going on my own. I really liked my boss and didn't want to leave without warning. And all of a sudden people started calling me. When I left Exxon 6,000 others left, too—they're all over the place. And when I finally decided to go on my own, my former boss gave me a contract to do outside work." As an independent contractor, Rodney does more or less the same kind of work she did as a Chemical employee.

"I'm very straightforward and not very tactful, so I think I'm better off outside a corporation. But having worked in several big companies, I have a broader picture of what goes on. I'm spending less time with my kids than I imagined I would be, but in

#### SNAPSHOT

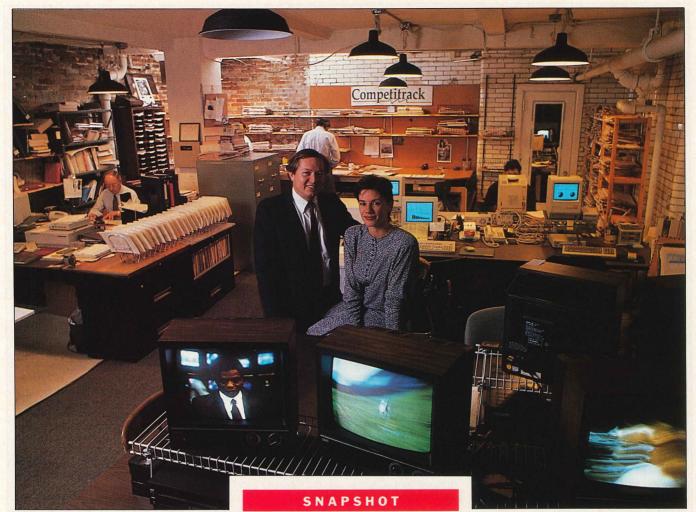
#### **Bonnie Lewis Rodney**

FORMER EMPLOYERS: Western Electric, Exxon, Chemical Bank

NEW COMPANY: BEAM Communications, Inc. STARTUP DATE: 1988

EQUIPMENT: AT&T 6300 PC, Omnifax fax machine, Toshiba 321 printer





the long run I expect I'll be able to spend more time with them. I'm making a lot more per diem than I was before; if I can keep making good money three days a week, I'll be pretty happy.''

Rodney is not a computer expert, though she uses an AT&T 6300 computer when she's writing newsletters. She worries about it breaking and having to wait for repairs ('at work you can just call up people and get it fixed''), and beyond that she sees herself as more of a project manager than as a writer sitting in front of a computer.

From her home office, she manages graphic artists and print shops to produce brochures for her corporate clients. Her favorite equipment is her Omnifax fax machine. "The fax is the best thing I've ever seen," says Rodney. "I'm sending stuff back and forth to all these companies. I love the whole thing. I just wasn't as stimulated in corporate life as I thought I should be—as I am now."

#### **IDENTIFYING AN INFORMATION NEED**

Two years ago, Robert Moss, 36, a director of marketing at Chemical Bank, gave up his \$120,000 salary and a corner office in Manhattan for a basement office in his apartment building. It was a bold gambit, but it has paid off. Today, he and his wife, Michela Nonis, run their own show, a profit-

#### **Robert Moss and Michela Nonis**

FORMER EMPLOYERS: Chemical Bank; Macmillan Publishing, National Lampoon

NEW COMPANY: Competitrack, a New York City financial ad-tracking service

STARTUP DATE: 1987

EQUIPMENT: 2 Macintosh IIs, 3 Macintosh Plusses, Apple LaserWriter, Sharp 9750 copier, 15 Panasonic VCRs, 6 TVs

making firm that tracks financial advertising. "Our business is only two years old so we're not doing better financially yet, but we're well on our way," says Moss, who has invested \$50,000 in business equipment.

The company, Competitrack Inc., monitors and analyzes financial advertising spending in the New York City area. With the help of 15 employees, eight Macintosh computers, an Apple LaserWriter, a Sharp copier, 15 VCRs, and six televisions, the Mosses spend 10 to 12 hours a day recording TV commercials on six channels and scanning 60 publications for print ads. Every month, they catalog 1,500 to 2,000 TV commercials and more than 6,000 print ads.

This information is published in monthly business reports that clients buy for \$8,000 to \$35,000 a year, depending on the ads they want monitored. Current clients include Citi-

Bank, *The New York Times, The Wall Street Journal*, Merrill Lynch, IBM, Apple, and various investment firms.

The ad-tracking business is a new one for Moss, but he knows his target audience well—his former colleagues. "If you're the media director at Merrill Lynch and you want to know how much Shearson is spending on mutual-fund ads, Competitrack tells you, and thereby helps you plan your own advertising strategy," says Nonis, a partner in the business whose publishing experience has been key in putting out reports. She worked in sales at Macmillan Publishers and in production at *National Lampoon* and is now responsible for the in-house production of Competitrak's 20- to 30-page reports.

Even with the idea and a market niche that was theirs for the asking, the question was: Could it be done? "Before we quit our jobs, we obsessively planned and tested for nine months," says Nonis. "We watched endless hours of video tape and timed ourselves with a stopwatch to find out exactly how long it took us to scan all the ads in a newspaper."

The next step was writing a business plan that detailed the potential market and the nature of the competition as well as the scope and probable cost of their operation. "The plan really forced us to hone our concept,"

#### The Making of a Consultant

#### James Finke, Former Fortune 500 Executive, Now Heads His Own Home-Based Consulting Firm

James Finke, former president and chief operating officer of Commodore International, was fired by Commodore's founder and then chairman Jack Tramiel in 1983. At age 55, after a career in high-tech management with Data General Paris, General Electric International, Motorola, and Commodore, Finke hunted for another top executive position. While so doing, he took on several consulting projects. He worked with Internetworks, a retailing operation that unraveled. He worked with The Interface Group, which sponsors computer trade shows, to help expand exhibits overseas. And he worked with ComputerWorld publisher Pat Mc-Govern, who wanted to sell American software overseas. Finally, in 1985, with no sufficiently attractive alternative and a new-found sense of his own value as a business consultant, Finke started his own firm, Interconsult.

Interconsult—which specializes in international markets—provides organization, positioning, marketing, and distribution services to "high velocity, high technology" companies. Clients include software companies; semiconductor design, engineering, manufacturing, and distribution firms in the U.S., Europe, and Asia; and a number of foreign governments and agencies. Finke works with two-full time associates in the U.S. and has affiliates around the world.

In a late night phone call, as he prepared to jet off on one of his frequent trips to Europe, Finke took the time to examine his last five years as an independent and compare them to his long career as a corporate executive.

#### Q: Why did you decide to go into business for yourself instead of taking another corporate job?

**A:** There aren't that many jobs for a past president of a New York Stock Exchange company. The jobs were either too small or unrelated to my skills. After a variety of consulting jobs, my self confidence grew, and I finally decided: Why confine myself?

I've found it exhilarating and stretching. Exhilarating to work without having to produce a quarterly report or meet with a board. Stretching to balance production for clients versus selling yourself. It's a dynamic balance you've got to maintain.

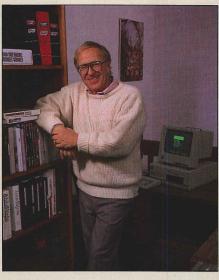
#### Q: What contributed to your self-confidence?

A: I did some jobs that felt good. I had significantly helped people in ways that I hadn't before, and I enjoyed that.

#### Q: How would you describe your primary skill when you left the Fortune 500 world?

A: High-tech international management.

Q: What do you find is the main difference between managing people as an executive and producing tangible work as a consultant?



**A:** As an executive, it's easy to be seduced by the expertise of a corporate staff. It may look like things are happening when nothing really is. As a consultant, you can be more efficient more quickly if you are involved in the process rather than just working as an adviser.

At the same time, one thing that surprises me working on my own is how much time it takes to make little things happen. That's true in a big company as well, but you're insulated from it because accounts receivable and everything else continues to function. Managing your own company you've got to see that invoices get sent out. Little happens without you.

#### Q: What parts of your corporate experience are most useful in your business today?

A: One of the things that appeals to clients is that I can say: "I was there. I spent 25 years making mistakes, so I can identify them." In addition, I stay in touch with an amazing number of contacts from my days at Motorola, Commodore, Data General, and General Electric. Many of these large-company alumni who have gone off elsewhere have become eminent in their fields, which happens to be my field, and I can call on them. I'm not consciously developing a network of old boys, but I do have one.

#### Q: Who was your first client?

**A:** Apple/Europe was one of the first clients. So was Don Estridge of IBM [Estridge headed the team that developed the IBM PC], who asked: "Why can't we sell IBM PCs in Europe?" I talked to salespeople, dealers, buyers, to find out whether it was the product or the method of selling. With a job like that, you try to walk in the moccasins of the people you are trying to sell to.

#### Q: How many clients do you have now?

**A:** I usually work on half a dozen projects at a time, with another half a dozen on the back burner. Most projects last for three to six months, though some are long term. Peter Norton Computing Inc. is one of those; I'm helping them get set up overseas in France and Spain, and, later, in the rest of Europe and Japan.

#### Q: What do clients expect from you?

**A:** Most want to start overseas operations. They ask for a two-week survey of opportunities in Europe, say, and ask, "Should we go?" and if so, "Will you help us?"

#### Q: When you first started your business did you work at home?

A: No. I had an office in downtown Boston. But it was a long commute, and I was traveling enough already. I'm generally out of the country two or three weeks a month. So I went out and bought enough telephone, computer, fax, and copier equipment to set up an office at home. I took half a floor in my house that overlooks a salt marsh, and then recently added another 500 square feet to the garage for a studio office.

#### Q: Did you intentionally avoid a home office because of the fear that you wouldn't be taken seriously?

A: There was some concern that others think you're not serious if you work at home. But I realized that that was a non-economic, non-productive attitude and that a home office made sense. A lot of what I do is over the telephone, and it's at 5 a.m. or 6 a.m., calling Europe, or 9 p.m., calling Tokyo. Clients don't visit me, I visit them. It was easy after I got over the apparent psychological and emotional need to have a real office.

#### Q: How are you doing financially, compared to what you could be doing at a Fortune 500 company?

**A:** My pension plan's not as good, and the stock options are non-existent. My income is as good or better, and the freedom is much better. My concern about bringing in business is greater—the next paycheck is not necessarily on the way.

My fees are quite high. I set my rates compared to my peers who are top consultants and lawyers. A lot of potential clients are discouraged by my rates, but those who know my work know that the value is high.

#### Q: Do you travel with a portable computer?

**A:** Not yet. I travel with a briefcase and go to hotels with good fax, good phone, and good message systems. I'm in touch with my home office by fax or phone twice a day. At home I use a computer to write reports. We're putting in a 386 system with networking, for my two associates.

#### Q: Do you have a car phone?

**A:** No. Am I likely to buy one? Yes. Is it practical? Probably not.

#### Q: Would you ever consider working for a big company again?

A: I can imagine a hypothetical situation where I would, if I found the right company with the right products in the right place, like Paris. But I enjoy the intimacy I now have and the talented associates I now have under my roof. Outside, I'm working with a collection of world-class peers. One of the ways we handle larger projects is to use outside consultants who are often international experts. To the extent that I can keep all these relationships, I'll be happy.

Moss says. "And we were very cautious in our financial estimates, which proved wise because it took us four months longer than planned to get started."

Finding clients was the real test. Moss, as most new-business owners do, tapped into his old network. "That first circle of clients is people you know. They're the few who will actually return your calls and talk to you and tell you if your product has value. The second circle is cold calling. We sent a mailing and followed up with calls to 40 advertisers. We didn't get through to one of them. A very bad day. But you keep hammering. The most depressing moment in any new business is the first time you send out your precious product and no one signs up or even returns your follow-up calls. You realize that marketing is a rough thing and that you don't have the connections.

Eventually, the cold-calling paid off. Moss landed one mutual fund as a client, and now counts every major mutual fund in the country as a client.

Tracking ads is not a new business idea. Leading National Advertisers and Broadcast Advertisers Reports both do the same thing—but they track all national advertisers and sell to any national advertisers. Competitrak—the only service of its kind—has found success by taking a diffuse and national idea and making it specialized and local.

Because the business is so new, the Mosses are sticking with the basics, re-examining their business every two months with 12- and 18-month cash-flow projections. Moreover, they plan to keep a lid on growth. Says Nonis: "It's been tempting to swerve into other related areas. We've been offered jobs in different industries in different cities. But by concentrating on our special niche, we really can perfect our basic systems."

#### SAME PRODUCT, DIFFERENT MARKET

If your company makes widgets and sells them primarily to men, why can't you start a company that sells widgets to women? You know how to make widgets, and you know how to sell—you are just finding a different customer. That, in essence, is what Kathryn Bondoux, 45, did when she left Bank of America in 1979 to set up her own investment firm.

After years as a pension and private-trust fund manager with Bank of America in San Francisco, Bondoux had had about enough of the corporate life. "I found the corporate world terribly inflexible," she says. Bondoux reckoned that the best bet for an escape was to streamline her corporate job and move it down to a smaller scale where efficiency and personal service would tell. She started the Bondoux & Lockwood Investment Council. (Brian Lockwood became a partner in the firm in 1987.)

Her idea was to manage the pension funds of medium-size companies, such as architectural and landscaping companies and retail stores. "The big banks aren't really set up to



take care of these little guys," she says. "I am."

But the big banks did have the right equipment. "When I left the bank, I went from complete computer facilities to nothing at all. At first, I would literally map out a portfolio on the back of an envelope." So she bought a computer and database software. "We were one of the first small companies to computerize. When you're on your own and have to do everything, you have to simplify your life. We knew if we were going to succeed, we simply had to have a computer."

Today, the Bondoux & Lockwood Investment Council is located in downtown San Francisco and has three Compaq 286 computers manned by two full-time employees to track the investments of some 30 clients. "The power of a computer is equal to that of 2.5 employees," says Bondoux.

Though she now works some 12 hours every day, seven days a week, there are certain compensations: "I've easily tripled my former corporate salary and I take six

#### SNAFSHU

#### Kathryn Bondoux

FORMER EMPLOYER: Bank of America

NEW COMPANY: Bondoux & Lockwood Investment Council, a firm that manages pension and private-trust funds for small companies and individuals

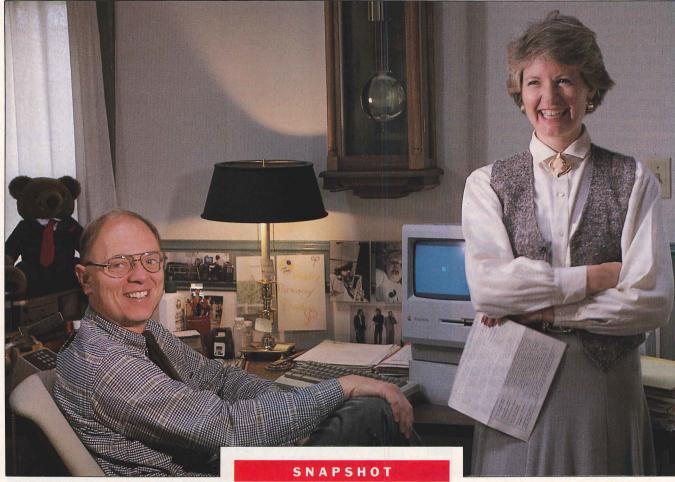
STARTUP DATE: 1979

EQUIPMENT: 3 Compaq 286 computers

weeks of vacation every year. And if I didn't want to be as successful as I am, I wouldn't work as hard as I do."

#### FINDING THE RIGHT BUSINESS CLIMATE

In 1978, Richard C. Young left Hoenig & Co., an institutional research and trading firm, to publish his own investment newsletters. Young Research & Publishing Inc., like the aforementioned Competitrack, identified an information need and is filling it. Young writes, edits, and publishes the twice-monthly Young's World Money Forecast, and sells it for \$425 a year to business owners, finan-



cial officers, and private investors.

Like Kathryn Bondoux, Young is, in a certain sense, selling the same kind of information as his former employer—but to a different customer. Young's International Gold Report (\$149 a year) and Richard C. Young's Intelligence Report (\$99 a year) go to individual investors, a group that Hoenig & Co. did not target. And, like Bonnie Rodney, Young had the blessing of a boss who was in some ways a mentor. "I had considerable help from Ron Hoenig, the chairman of Hoenig & Co. Without Ron, it would have been tough sledding. When I told him I was leaving, he said, "I'll help you."

Young, who writes 15,000 words a month in longhand on legal paper, and his wife, Debbie, who handles the electronic publishing end of the business, put out three newsletters and sell to 30,000 people. They have a good thing going. "How many people do you know who walk to work, spend more time with their family than they do working, and earn more money than all but the top executives at General Motors?" asks Young.

Despite the prodigious effort in research, writing, and publishing that goes into the products, and all the planning that began as far back as 1970, Young attributes a good part of the company's success to his business location—Newport, Rhode Island. Young and his family moved there from a Boston suburb when he left Hoenig & Co., primarily

#### Richard and Debbie Young

FORMER EMPLOYER: Hoening & Co.

NEW COMPANY: Young Research & Publishing Inc., an investment-newsletter publisher

STARTUP DATE: 1978

EQUIPMENT: 3 IBM PCs, 2 Macintosh Plusses, Apple LaserWriter, fax, modem

for a change of scenery. "I hated the commute, I hated the suburbs, and I hated the city," says Young. "I wanted to live in a town."

Everything about this Navy and yachting town has worked in their favor—even though conventional wisdom and friends told Young that a publication like *Young's World Money Forecast* should be published in a place like Boston, New York, or London. Most important, Young has been able to attract the interest of major business publications, because he feels the media has a "big interest" in Newport. "You don't sell things without letting people know what you're doing. The head man at U.S. West has a good phrase: 'If you don't make dust, you eat dust.' And I found purely by happenstance that folks in the media say, 'Hey, Newport!' "

On the purely business side, Young also found advantages. Office overhead—both at home and for commercial space—is about half as much as it would be in Boston or a fancy suburb. Printing and mail services are

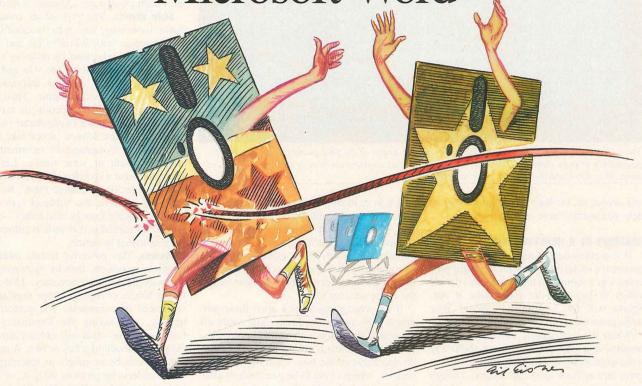
fast and dependable. "We're probably the biggest mailer around and get blue-chip treatment from the post office. Small-town people will help you more than big-city people. We mail Young's World Money Forecast within 24 hours of when I start to write it—there's no way we could have done that in Boston. I'd be just another fish in the tank."

Meanwhile Debbie, 40, mastered the electronic end of the enterprise. "My wife didn't know a computer from a Volkswagen when she started and now she's as good as anybody in the U.S. on that Macintosh," says Young. Says she: "Without the two Macintoshes and PageMaker, we couldn't do the business." Debbie, who works about five hours a day in her home office, prints camera-ready copies on an Apple LaserWriter before sending them off to the printer. In addition, they use three IBM PCs and a database program to handle mailing lists.

Young is well aware of his place in the new era of emancipation from the corporation. And like so many others who have gone into business on their own in the 1980s, he revels in the change. "This is definitely the wave of the future. There's no way our kids [now 18 and 16] are going to go to work for anyone else. The day they graduate college they'll have their own businesses. We're already planning. All because of computers and fax machines. Computers are one of the main reasons we can do this."

## The Top Stars Of Word Processing





#### BY STEVE MORGENSTERN

What Makes
These Best-selling
Writing Tools
So Popular?
Find Out with
Our Side-By-Side
Comparisons of
Both MS-DOS
And Mac Versions

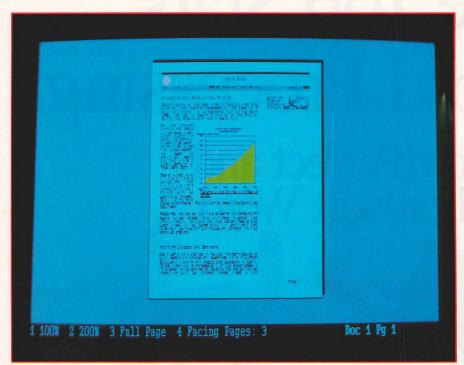
or many of us, word processing is not just another software category—it's a way of life. Without word processors, I couldn't handle the volume of verbiage necessary to make a living as a freelance writer. Imagine the additional time needed to rewrite, revise, correct—and then turn out a clean final copy—using a typewriter. Couldn't be done.

Of course, I am far from alone in this utter dependence on word processing. For business, professional, and academic people of all ilks, what comes out of the computer printer frequently determines what goes into the bank account.

STEVE MORGENSTERN, a contributing editor for HOME-OFFICE COMPUTING, examines dozens of new word processors each year.

To serve this teeming multitude of text manipulators, hundreds of word processors line the software shelves. From this universe of choices, two programs have emerged as top stars: WordPerfect and Microsoft Word. According to most sales reports for MS-DOS word processors (such as Egghead Software's monthly best-seller list), these two are ranked first and second; some months one is ahead, some the other. Number one on the Macintosh is the well-established Word, but the newer WordPerfect is also attracting fans. I'll compare MS-DOS versions below. (Also see 'The Mac Variations. . . .'')

The two best-sellers have much in common. They're flexible, powerful—and intimidating. We're talking manuals over 400 pages long, on-line tutorials, keyboard templates to help you recall arcane keystrokes,



The View command in WordPerfect displays a graphic image of the final printed page with precise positioning of page elements (both graphics and text) and an approximation of the actual typefaces used. This saves you from errors prior to printing.

and scores of ancillary books promising to help you master these writing tools.

#### ANATOMY OF A HEAVYWEIGHT

If you enjoy heated arguments, put a proponent for each of the best-selling word processors in a room, tell them you can't decide which to buy, and let them duke it out. Sparks will fly, I promise. "What? Your word processor better than mine!? Ha!!"

When the dust clears, however, the fact remains that you can tackle just about any word-processing assignment with either program and achieve excellent results. Though you can take a stopwatch to the two and find minor variations, they're both plenty fast for real-world applications.

Word proponents like to criticize the way WordPerfect handles cursor movement and movement of blocks of text. They also take potshots at WordPerfect's "nonstandard" assignment of function keys. Granted, two choices in the standard WordPerfect keyboard layout go against prevailing practice in MS-DOS programs: The Help function is on the F3 key instead of F1, and F7, instead of the ESCape key, cancels an operation. Beyond that, though, it is hard to think of another standardized keyboard procedure in the non-standardized world of IBM-compatible software. And with version 5.0, Word-Perfect includes an alternate keyboard definition file that lets you move these functions to their more familiar keys.

A common beef against Microsoft Word among WordPerfect fans is the screen layout,

which in its default configuration includes an on-screen border and menu bars that leave less room for text. Another familiar rap against *Word* is that it's slow. In the current version 4.0, however, its speed is improved to compete with *WordPerfect* in most operations, and the screen display can use nearly the entire area for text.

If we were going to pick apart these programs in picayune detail, we could easily fill the rest of this issue with pro-and-con minutiae. That, however, isn't a practical way to choose between the two. Each has its peculiarities, which cease to be peculiarities after you've worked with them long enough.

Each package also offers distinctive capabilities. If your word-processing needs fit one of these, then that program really is a better choice.

But before we analyze the differences between these two heavyweights, let's consider whether that's the division in which you belong in the first place. What distinguishes a heavyweight writing tool from a so-called "lightweight" word processor? Features—a complete range of tasks that less complete programs just won't handle. Some of these features can be found in other word processors, but only a heavyweight has the reach and stamina to do it all. Here are several key areas where the heavyweights shine.

#### SHARED STRENGTHS

**Mail Merge.** WordPerfect and Microsoft Word go beyond simply inserting Field A from a data file into Slot B in a master letter.



You can merge selected recipients from your data file if you like and even let the word processor choose which of several alternate paragraphs to insert in a letter depending on the information in an addressee's records.

Style Sheets. The style-sheet concept, a major timesaver, has been successfully incorporated in both WordPerfect and Word. You set up a style sheet by defining a set of formatting commands-font size and style, alignment, spacing, margins, and tabs-as a style with an individual name. Then, when you want to format a section of text, you apply the style with a keystroke or two, and all aspects of the defined format take immediate effect. Instantaneous reformatting is another benefit of style sheets. Let's say you've defined a style for all the subheadings and later decide to change them. No problem: just redefine the subhead style—let's say by changing from bold to italics—and all the text formatted in that style is automatically reformatted to match.

Macros. This powerful feature minimizes mindless repetition, thereby increasing productivity and ensuring accuracy. That means taking blocks of copy you type regularly, or sequences of commands you perform frequently, and saving the keystrokes in a form-a macro-that will execute automatically at the touch of a key or two. A macro's function can be as simple as inserting your return address by pressing ALT-A, or astonishingly complex. Both WordPerfect and Word create macros by recording keystrokes as you type, or by having you write macro "scripts" in a programming language not unlike BASIC. A written macro, for instance, could prompt a user through the entire task of completing and printing a standard form, including selecting from a menu of printers.

**Math.** While no word processor is likely to replace your spreadsheet, the heavyweights will perform the four basic calculations—addition, subtraction, multiplication, and division—on figures in your document (*Word* includes a fifth, percentages). This can have special value when used with mail merge. You can, for instance, print a batch of invoices by preparing a customer data file and letting your word processor merge the figures into the appropriate spots on the invoices—complete with totals, sales tax calculations, and so forth.



**Sorting.** Another classic time-waster when done manually, putting information into alphabetical or numerical order is expedited by *WordPerfect* and *Word*. Sorting works equally well whether you are manipulating blocks of text or items in a table. Sorting lines or paragraphs rearranges them based on the first letter or number in each. When working with a table, you can choose any column for sorting, even if it's not at the beginning of a line, and all the rows in the table will be rearranged properly.

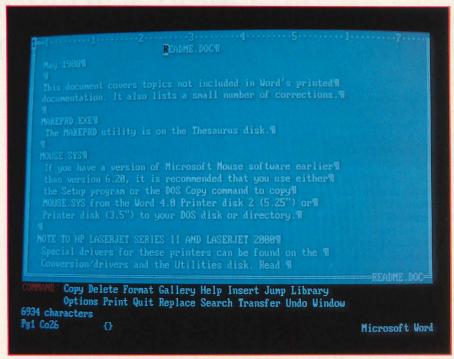
Spelling Checker and Thesaurus. While basic word processors now often include a spelling checker, a thesaurus is usually a heavyweight feature, and it's much more useful than I initially expected. My paperback thesaurus remained on the bookshelf for years; I never took the time to reach for it when searching for the right word. With an on-line thesaurus, though, it's easier to search for inspiration by pressing a few keys than by wracking my brains or yelling downstairs to my wife, "Honey, what's another word for. . . ."

Line Numbering. A feature targeted at law offices, having your word processing software number the lines of a document in the margin may prove useful in other settings as well. Numbered lines can act as a quick reference when a group is working on a long document.

#### **WORDPERFECT POINTS OF PROWESS**

**Graphic Greatness.** If you want to add pictures to your documents, *WordPerfect* 5.0 is the clear choice. You can import an extraordinary variety of images, including bit-map pictures, scanned images, object-oriented drawings, and PostScript graphics. There's even a screen-grabber utility to capture images from nearly any on-screen display for insertion in a *WordPerfect* document. Adding a graphic element is simple; just define a box and put your picture into it. You can place the image wherever you want, even wrapping type around the rectangular frame if you choose. And you can size and rotate the image within *WordPerfect*. Well done!

Microsoft Word has made a half-hearted attempt to emulate this capability with an accessory program called Pageview, but it's clearly a kludge (pronounced klooj—useful computer slang meaning an inelegant solution to a real shortcoming). Pageview does



In its default, or start-up, configuration, Microsoft Word includes an on-screen border with the menu below. However, beginning with version 4.0, Word can be customized to use nearly the entire area for text.

not run as a part of *Word*; it's a separate Windows-based program that displays *Word* files and lets you add graphics to them. However, while margins and page breaks can be adjusted within Pageview, you must return to *Word* to edit text. And you are limited to full-page or full-column-width graphics (no text wrapping), and the graphic file formats accepted are limited. No comparison.

What-You-See-Is-Almost-What-You-Get. True desktop publishing programs strive for WYSIWYG (what-you-see-is-what-you-get) display. Neither WordPerfect nor Word has

moved closer with its View command, which displays a graphic image of your final printed page with precise positioning of page elements and an approximation of the actual typefaces used. It isn't perfect, but it's useful for checking the placement of type and graphic elements before printing.

reached this level, but WordPerfect has

**Jockeying for Position.** Usually location in a document is expressed in columns and line numbers. You can display the cursor's position in this format with *WordPerfect* if you prefer, but you can also express it in more precise measurements: inches, centimeters, or even points. This is particularly useful when using proportional typefaces in which each letter does not take up the same amount of space (a "W" is wider than an "I," for instance).

Another positioning strength is the new Advance command, which will place your cursor either at a measured distance relative to its previous position or at a designated spot on the page. That makes *WordPerfect* ideal for filling in preprinted forms. Measure the locations of the blanks in the form and tell *WordPerfect* to Advance to each spot in sequence. Incorporate this process in a macro and you can automate the entire time-consuming form-filling process.

**On-Screen Columns.** I really appreciate *WordPerfect*'s seamless handling of columns. Newspaper-style or *snaking columns* (where the text reaches the bottom of one column and is automatically carried over into the next) can be displayed on-screen and

#### **Software Info**

#### MS-DOS

**Microsoft Word** v4.0 (\$450). Microsoft Corp., (206) 882-8080. Requires: 320K; two drives (hard-disk drive recommended); CGA, EGA, VGA, Hercules; DOS 2.0 or higher; 5.25-inch and 3.5-inch.

**WordPerfect** v5.0 (\$495). WordPerfect Corp., (800) 321-5906; (801) 225-5000. Requires: 512K; two drives (hard-disk drive recommended); CGA, EGA, VGA, Hercules; DOS 3.0 or higher; 5.25-inch and 3.5-inch.

#### **MACINTOSH**

**Microsoft Word** v4.0 (\$395). Microsoft Corp., (206) 882-8080. Requires: 512Ke; two drive (hard-disk drive recommended); System 4.1 or higher.

**WordPerfect** v1.0.1 (\$395). WordPerfect Corp., (800) 321-5906; (801) 225-5000. Requires: 512Ke; two drives (hard-disk drive recommended); System 4.1 or higher.

## The Mac Variations of WordPerfect and Microsoft Word

A seasoned user of the all-star MS-DOS word processors can't help but notice holes in the Mac renditions of *WordPerfect* and Microsoft *Word*. A few are relatively minor lapses, but others really matter for some types of word processing. For instance, why do these programs have mediocre math capabilities compared to their MS-DOS siblings? And though I may never use a Table of Concordances (an element of a legal document), someone working in a law office would. Both MS-DOS versions will generate such a table—neither Mac version will.

More significant shortcomings surface in mail-merge. Both Mac programs provide the basic capability, but neither is as comprehensive as the respective MS-DOS versions. For example, there is no facility in either Mac version to print form letters for only selected names in a mailing list.

Despite shortcomings relative to their MS-DOS relatives, the list of high-end Macintosh word processors is short and sweet: Microsoft Word and WordPerfect Mac. FullWrite Professional is an intriguing alternative, but only if you have a Macintosh SE with at least 2MB of memory, or preferably a Mac II with its extra speed.

The basis for choosing between *Word* and *WordPerfect* on the Mac is partly a matter of style, partly a matter of function. Here's a rundown of key considerations.

#### **MICROSOFT WORD**

Several features that simplify word processing—the most notable being style sheets and customizable menus—make writing with *Word* on the Mac comfortable.

Style sheets are extraordinarily useful for applying several formatting specifications font, font size, font style, alignment, line spacing, margins, and tab stops-to text with a few quick keystrokes. Word implements this feature elegantly; you define a style by example. Just highlight text formatted in a desired style, then give it a name. From then on you can apply the same style by choosing from a pull-down menu or using a quick keyboard shortcut. If you prefer, you can also construct or edit a style step by step. This feature has special value if you are also working with version 3.0 of PageMaker, which can directly import Microsoft Word style sheets with the text files.

Microsoft Word's menu customization capability is truly ingenious. By simply pointing and clicking, you can add or delete fonts and font sizes from the font menu and add special formatting commands to the format menu. Even better, you can add an extra

category called "Work" to the menu bar and put glossary entries (blocks of frequently used text), style sheets, and document names onto this menu, obviating trips through several menus with a single pull-down selection.

Both word processors offer a preview feature that produces a miniature on-screen version of the printed page, with page numbers, footnotes, and graphics displayed in their proper positions. Though you cannot edit text with either program in this view, *Word-Perfect* Mac offers no adjustment possibilities at all, whereas *Word* lets you make several page-format adjustments.

Microsoft Word also lets you draw lines and box text for emphasis, features that are surprisingly absent in WordPerfect. As with all Macintosh word processors, Word lets you insert graphics into text; it also gives you especially fine control of placement. For instance, it's easy to choose the side of a page on which to put an image, and it's not hard to make text wrap around an irregularly shaped graphic.

Two notable omissions in *Word* had been keystroke macros and a thesaurus—but with the new version 4.0, Microsoft has bundled the *Auto Mac III* macro program from Genesis Micro and Microlytics's excellent thesaurus, *Word Finder*. A third bundled program is *SuperPaint* (Silicon Beach Software), a combination paint and draw program.

#### **WORDPERFECT MAC**

WordPerfect Mac offers a few significant features that are lacking in Microsoft Word, as well as a number of appreciated touches.

Macros are handled well. Not only can you record a series of keystrokes to play back repeatedly later, you can even nest macros (have one macro run another and then continue) or chain them (one macro ends and starts the next). The tutorial section of the manual provides several excellent examples of how macros can be constructed to breeze through, for instance, mail-merge and search-and-replace tasks. Unfortunately, you can't edit macros as you can with the MS-DOS version of *WordPerfect*; if you get it wrong or want it changed, you must re-record the whole macro from scratch.

Several signature features of the WordPerfect family are welcome newcomers to the Mac world. File management is first rate, letting you carry out all the basic Finder functions (opening new folders, copying files, getting file information such as date of last modification, and so on) without leaving the program.

Two additional file capabilities bear men-

tioning. If you like, the program will automatically save your document at timed intervals, so you won't lose all your work should you lose power. You can also password-protect files.

WordPerfect is known as a "cleanscreen" word processor, and the Mac version offers an option that turns off everything but the bottom status bar. It would be more useful if the vertical scroll bar stayed onscreen, but without it you do gain a few lines.

Newsletter makers and script writers, note: Another strong suit of *WordPerfect* is the way it handles text columns, and here the Mac version shines. You can quickly define either newspaper-style snaking columns or parallel columns. *Word* on the Mac supports only snaking columns, and they must all be equal widths, whereas *WordPerfect* is entirely flexible about column widths and the spaces between columns.

WordPerfect is the first Mac word processor I've found that includes one capability that every MS-DOS word processor offers: the ability to switch between insert mode and overstrike mode. I have an ongoing project that requires filling in an on-screen template (or form) bordered on all sides. This can only be done conveniently in overstrike mode—in short, I couldn't do it on the Mac until now.

The list of handy features is extensive, including centering text vertically on a page, adjustable kerning, separate footnotes and endnotes, and a full set of functions assigned to the function keys on Apple's extended keyboard. But surprisingly, the program does not offer even simple line-drawing functions, and its graphics import capabilities are limited to ordinary clipboarding—far less sophisticated than *Word* on the Mac or even *WordPerfect* 5.0 in MS-DOS.

There is only one nagging problem with WordPerfect Mac: codes. Every word processor uses hidden codes to format text, but you rarely have to deal with them. Yet when editing text in WordPerfect Mac you do. It isn't a burdensome task; selecting "Show Codes" produces a split screen with text shown plain on top and with visible, editable codes below. There are two saving graces here. The code markers are cleverly designed self-explanatory icons, and the search-andreplace function is set up to locate codes within the text. Still, aspects of this system are intrusive, particularly when editing your document. For instance, it isn't enough to move your insert position with the mouseto move beyond the formatting codes, you have to use keyboard commands. That's un-Maclike and just plain bothersome.

edited side by side. Combined with the aforementioned View command, this makes WordPerfect practical for creating newsletters. And the excellent parallel columns, in which separate text blocks are positioned side by side, are especially welcome if you're putting together a table or writing a script in standard format (which requires character names and stage directions on the left and dialogue on the right).

Footnotes and Endnotes. Both word processors number and position footnotes automatically, but *WordPerfect* also lets you maintain separate footnotes and endnotes. That is, if you want some references printed at the bottom of the page on which they occur, and others grouped together at the end, *WordPerfect* will accommodate you.

Index and Table of Contents. You can generate an index with either program, but Word-Perfect streamlines the process by letting you prepare a concordance—a list of terms that you want to include in your index. WordPerfect will then work through the list, searching your file for the terms in the concordance and indexing them automatically. A table of contents can also be created automatically, with appropriate page numbers inserted, after you've marked the entries you want included.

Long Documents. WordPerfect offers a master document feature that eases preparation of lengthy manuscripts. For example, if you are working on the Great American Novel (join the club), you can maintain separate chapter files, then list the file names in your master document and have the entire magnum opus printed together, with page numbers and other references maintained throughout.

Contrast this functionality to the MS-DOS version of *Word*, which does not include a command for linking files. You can create a mail-merge file that will do nothing but print a string of documents by using the Include command, but there's still no way to make references follow properly.

Redlining, Strikeout, and Document Comparison. Both programs offer redlining and strikeout capabilities—formatting techniques that keep track of text changes made to a document, highlighting additions (redlining) and deletions (strikeouts) as they occur. Where WordPerfect excels is the document comparison feature, which automatically compares two versions of a file and highlights the differences between them.

#### **MICROSOFT WORD'S SPECIAL SKILLS**

**Linked Spreadsheets.** If you want to include sections of a spreadsheet in your word-processed documents, Microsoft *Word* is for you. Using a unique Link command, you can import sections of a spreadsheet created with Lotus *1-2-3*, *Excel*, or *Multiplan* directly into your text. You don't even have to know your



For those writing extensively, each word processor's value far outweighs its initial overhead both in dollars and learning time.

worksheet's cell designations; *Word* can locate named ranges in your spreadsheet. And if the spreadsheet data changes between writing sessions, you can update the figures with a simple command.

**Tutorial and Help.** Neither program is going to win awards for ease of use, but *Word*'s disk-based tutorial is a superb educational tool. *WordPerfect* also offers a tutorial, but it doesn't have the depth, breadth, or clarity of the Microsoft version. Both manuals are adequate, but *Word* once again can rightfully claim superiority.

Word's help function is another strong point. Not only can you call up quick help from the menu, you can even launch the appropriate tutorial lesson from within Word, reviewing a complete presentation on the subject before returning to your document.

**Outlining.** Both programs offer outlining, but *Word*'s is the real McCoy, whereas *WordPerfect*'s is far less useful. *Word* outlines work much the way *ThinkTank* and other dedicated outline processors do. You arrange your thoughts in headings and subheadings, attaching body text where appropriate. By expanding and contracting the display, you control the number of subheadings that are visible—which lets you see either the big picture, all the details, or some points in between. And when you move a heading, all the subheadings and body text under that entry move along with it, letting you rearrange your thoughts with ease.

Word supports automatic numbering of each outline level, and you can switch instantly between viewing the same document as an outline or as a text file, without numbers and ready to print. You can even set up two views of the same document on-screen, with the full text version in one window and the outline in the other.

WordPerfect's outlining function, on the other hand, cannot attach body text to sub-

headings, making it marginal at best.

Multiple Documents. If you like to work with lots of documents at once, go with Word. WordPerfect lets you open two files at a time—Word allows up to eight. Granted you can't see anything worth seeing in eight documents arrayed like little checkerboards across your screen, but the Zoom command zaps a window up to full-size display and closes it back down to window size when you're done. This is great if you often cut and paste text, such as names and addresses, among your files.

Redlining and Strikeout. When you turn on the Revision Marks option, Word can track revisions as you type. While in this mode, it displays any new text in a distinctive redlined format. It doesn't wipe deletions from the screen, but displays them with a line through the text. This differs from the way WordPerfect handles the same function—you must select redlining and strikeout as fonts if you want them to display while you type. However, as described above, you can highlight the changes automatically by comparing your edited version of the file to the previous saved version. Both systems perform effectively; the choice is a matter of style.

Line Drawing. You can create lines and boxes with either word processor, but Word handles the task more elegantly. By entering line-drawing mode, you can move the cursor around the screen with the keyboard, drawing lines as you go and marking corners when you make a turn. There is also a tabbased vertical line option that makes placing lines between tabular columns a snap. And most impressive of all, you can box text and have the box size adjust automatically if you edit text within the box. Even PageMaker desktop-publishing software won't do that for you.

#### THE LAST WORD

As I see it, those are the essential buy/don't-buy differences. Either program requires more effort to master than most people are willing to expend for many writing tasks. For those writing extensively, however, each word processor's value far outweighs its initial overhead both in dollars and learning time. And if you bump up against a tough problem, support from the publishers (Word-Perfect Corporation and Microsoft both offer toll-free support numbers) or help from your peers (popularity has its virtues) will probably get you through.

Remember, though, that Microsoft Word and WordPerfect are power tools and should be considered as such. You wouldn't use a chain saw to cut flowers in your garden, and you don't need WordPerfect or Word to bang out a few paragraphs. Still, these two programs offer many potent capabilities that are little short of miraculous for those who need them.

## Upgrading Your Computer

## MACINTOSH

Add Speed, Storage, and Other Peripherals To Handle Any Job

#### BY CHARLES H. GAJEWAY

irst, things slow down. Just a little at first, then more and more, until you swear your Mac's gone on strike. You begin to see the dreaded bomb of the system error message, and it seems like you spend your entire life switching floppies for no good reason. And finally the inevitable messages appear: "Not enough memory to complete this operation" or "Insufficient disk space; printing terminated." When one or more of your tasks gets too big for your Mac, that formerly trusty, easy-touse ally becomes a nasty, sullen obstacle that can actually make you less productive.

In my experience, more than with any other computer, Macintosh users outgrow their machine's capacity. The graphics orientation and ease of use that are the hallmarks of the Macintosh are power-hungry-gobbling RAM and disk space at incredible rates. However, you can upgrade your Mac to handle just about any job.

In general, you should limit upgrade spending to 50-60 percent of the cost of trading up to a more powerful machine. This would be about \$800 to give your Plus the capabilities of an SE or \$1,400 to put the power of a Mac II in your SE. Many Plus owners could budget up to \$1,900, since it generally makes more sense to upgrade to the

CHARLES H.GAJEWAY, a member of HOME-OFFICE COMPUTING's Advisory Board, wrote "Upgrading Your Computer Part I: MS-DOS" and "Upgrading Your Computer Part II: Apple II" in the November and December issues.

capabilities of a Mac II than to stop at an SE. (If your Mac does not have 1MB of memory, an 800K disk drive, and an SCSI port, read Minimum Requirements, page 56.)

#### STORAGE

A floppy-based Macintosh system is inadequate for professional applications; System 6.0 won't fit on a single floppy, and newer Mac software occupies more than one disk. With prices of SCSI hard-disk drives finally dropping to reasonable levels, they should be at or near the top of your list.

I recommend external drives. They can be moved from one machine to another very simply, and they subject your Mac to less heat and vibration. Though a 20MB drive is adequate, 40MB drives offer twice the storage and cost only about 30 percent more, making them an excellent value.

The Macintosh hard-disk-drive market has suddenly blossomed, particularly at the low end. New firms like DPI are selling directly to users, offering proven Seagate mechanisms at attractive prices. For a bit more money, Jasmine Technologies offers a product backed by its reputation for quality and support. If you prefer to buy from a dealer offering service, CMS Enhancements, Western Digital, and Everex products offer excellent value at typical discounts.

A note of caution: The Plus, SE, and Mac II differ slightly in the way they format and access hard-disk drives. In order to obtain the fastest performance from your drive, be sure to format the hard drive on the type of Mac with which you will use it.

#### **CRAMMED WITH RAM**

The latest generation of Macintosh software is making heavier demands on memory. This hit home when I discovered that I could not run FullWrite on a 1MB Mac unless I removed most of the desk accessories and control-panel files from my system. Like FullWrite, sophisticated graphics programs such as SuperPaint 2.0 and MacDraw II run much faster with 2MB or more of memory installed.

Even if your software doesn't require gobs of memory, extra RAM can make your computer run much faster. One use for the extra RAM is a RAM disk. If you routinely use large databases, loading a file into a RAM disk will make searches and lookups go much faster.

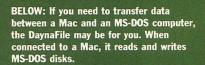
Unfortunately, while the RAM chip shortage has eased, prices remain prohibitively high, nearly double year-end 1987 prices. The price of a 2MB expansion kit is \$1,199 (Apple Computer). Prices will undoubtedly come down as new factories begin to produce chips in quantity, and I advise holding off buying RAM until then.

If your needs are immediate, purchase 2MB of surface-mount RAM. These will work in any Macintosh, so your investment will have maximum utility. If \$850 is simply too much, consider MacSnap Plus2 or 2SE (Dove Computer Corp., \$729). These prod-

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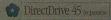
#### **ANATOMY OF AN UPGRADE**

LEFT: If you're tired of the small Macintosh screen, take a look at the big picture with a full-page monitors. TOP: A coprocessor board, like the Mac86, will let you run MS-DOS software on your Mac. It is the most direct way to bridge the Mac/MS-DOS gap. BOTTOM: Accelerator boards give you the exhilaration of Mac II speeds without draining your wallet.









ABOVE: With a hard-disk drive, you'll never have to swap disks to make a program run.



RIGHT: With programs getting larger and larger, the base memory of most Macs is no longer adequate. Buy only the memory that you need now, because chip prices will come down in the future.



## When one of your tasks gets too big for your Mac, that formerly trusty ally becomes a nasty, sullen obstacle that can actually make you less productive.

ucts expand your Mac from 1MB to 2MB using 256K chips. While the price is attractive, they cannot be expanded further; if you ever need more RAM, you will have to remove the MacSnap boards and replace them with 1MB SIMMs, thus buying memory twice.

#### HITTING THE GAS

The main advantage of the Mac II is its blazing speed. With a higher clock speed and 68020 processor, the II can chug through nonnumeric data at four times the rate of an SE, and with its built-in 68881 math coprocessor, it can do numeric operations more than 30 times faster. This is a significant advantage: A complex spreadsheet that takes two minutes to recalculate on an SE crunches to completion in six seconds on a Mac II.

Thanks to the ingenuity of several firms, SE and Plus owners can now get most of the speed and power of a Mac II at a fraction of the price by getting a coprocessor board. Most of these boards can also be equipped with a 68881 math coprocessor, an option I highly recommend if you routinely do number crunching or use complex graphics programs.

The Speed Card (SuperMac Technology, Inc., \$399 without 68881 coprocessor) trades off some speed for price. Instead of a 68020, this board uses a high-speed 68000 processor running at 16MHz. As a result, general throughput is two times instead of four times faster, although math operations receive a full boost from the 68881.

For top-of-the-line acceleration, SE owners should consider the HyperCharger 020 (GCC Technologies, \$999) or the Orion SE20/16 (MacPeak Systems, \$795). The Hy-

#### MINIMUM REQUIREMENTS

It is important to upgrade to the Plus, since to support the latest hardware and software, you will need at least the standard 1MB RAM, an 800K floppy drive, and a SCSI port.

Upgrading a 128K or 512K Mac involves some potentially confusing choices. Apple offers a logic board upgrade and an HFS upgrade kit. The logic board swap has a list price of \$799 for 128K machines or \$599 for Apple 512K models, plus \$299 for the HFS kit; the all-Apple solution is clearly not an outstanding value

A better alternative is to trade in your old Mac for a Plus. Depending on the condition of your machine, for \$600 or less Sun Remarketing will swap your 512K Mac for a reconditioned Mac Plus with a 90-day warranty. Once you have a Mac Plus, you're ready for other upgrades.

perCharger can be equipped with up to 4MB of RAM, for a possible system total of 8MB, and the Orion SE20/16 can be upgraded to run at 20 or 25MHz and has a video option.

#### MacDOS?

As the Macintosh SE and II work their way into American business, the need to share data between Macs and PC compatibles has created a new class of peripherals. Two of the more amazing products are AST Research's coprocessor boards, the Mac286 (\$1,599) and the Mac86 (\$599). Both boards effectively place an MS-DOS environment inside your Macintosh. The Mac86 emulates an XT inside an SE, and the Mac286 is an AT-compatible for the Mac II. Both boards can run MS-DOS software and transfer MS-DOS files to and from the Macintosh desktop, bridging the MS-DOS/Macintosh gap in the most direct fashion possible.

If you only need to share data between your Mac and an MS-DOS system, there is a more practical solution. For frequent data sharing, consider Apple's PC 5.25-inch disk drive (\$399 plus \$129 for a controller card) and Apple File Exchange software, or Dayna Communications' DaynaFile (\$650-\$1,105). Both products translate data between Mac and 360K MS-DOS disks on an SE or Mac II; the DaynaFile is a SCSI unit that will work on a Plus as well and can be equipped to handle either 1.2MB 5.25-inch, 720K 3.5-inch, or 1.44MB 3.5-inch disks.

If you only transfer data occasionally, file transfer software is an economical answer. Software solutions include MacLink Plus (Dataviz, \$195) and LapLink Mac (Traveling Software, \$140). These products generally use a cable or modem to connect the Mac to the other computer. File transfer via software is more time consuming than disk-to-disk, but it can transfer files that are too big to fit on a floppy.

#### THE PICTURE WINDOW

One popular accessory for the Mac is the large-screen monitor. There are three basic types: 12- or 14-inch displays that are simply larger versions of the Mac's built-in monitor, 15-inch vertical displays that show one full page, and 17- to 21-inch horizontal models that display two full pages.

The larger versions of the Mac's internal screen, like the Big Top (Colby Systems Corp., \$400), are for users who like the basic Mac screen, but either have trouble seeing the screen or want to work farther from it.

Full-page displays are great for page layout tasks, graphics work, or any other job where seeing more of a page at once would make life easier. Such units as the Full Page Display (Radius Inc., \$1,690–\$1,790) and the Nutmeg/Xerox Full Page Display (Nutmeg Systems, \$1,595) are typical performers in this category. Landscape displays like the Radius Two Page Display (\$2,490) and the Big Picture (E-Machines Inc, \$1,795–\$2,495) are useful for page layouts, spreadsheets, and database tasks in which being able to see more is critical.

#### WRAPPING IT ALL UP

Based on my experience, using a Mac Plus or SE upgraded to include 2MB of RAM, an accelerator board, a 40MB hard-disk drive, and a large-screen display is a truly pleasurable computing experience. The added speed and convenience of such a system elevate the Mac into the top echelons of personal computer performance.

How you go about building your dream Mac depends on your needs. The important thing about expanding your Mac is that you can add a generous portion of power to an already strong performer. And your productivity and performance will benefit as a result.

#### MANUFACTURERS MENTIONED

Apple Computer Inc., 20525 Mariani Ave., Cupertino, CA 95014, (408) 996-1010; AST Research Inc., 2121 Alton Ave., Irvine, CA 92714, (714) 863-1331; CMS Enhancements, Inc., 1372 Valencia Ave., Tustin, CA 92680, (714) 259-9555; Colby Systems Corp., 4723 N. Warren Ave., Fresno, CA 93705, (209) 222-4985; Dataviz, Inc., 35 Corporate Dr., Trumbull, CT 06611, (203) 268-0030; Dayna Communications, Inc., 50 S. Main, Salt Lake City, UT 84144, (801) 531-0600; Dove Computer, 1200 N. 23rd St., Wilmington, NC 28405, (800) 622-7627; DPI, 40 Corning Ave., Milpitas, CA 95035, (800) 825-1850; E-Machines Inc., 9305 SW Gemini Dr., Beaverton, OR 97005, (503) 646-6699; Everex, 48431 Millmont Dr., Fremont, CA 94538, (415) 498-1111; GCC Technologies, 580 Winter St., Waltham, MA 02154, (617) 890-0880; Jasmine Technologies, Inc., 1740 Army St., San Francisco, CA 94124, (800) 347-3228; MacPeak Systems, 1201 Spyglass, Austin, TX 78746, (512) 327-3211; Nutmeg Systems, 25 South Ave., New Canaan, CT 06840, (203) 966-3226; Radius, Inc., 404 E. Plumeria Dr., San Jose, CA 95134, (408) 434-1010; Sun Remarketing, Inc., PO Box 4059, Logan, UT 84321, (800) 821-3221; SuperMac Technologies, Inc., 295 N. Bernardo Ave., Mountain View, CA 94043, (415) 964-8884; Traveling Software, Inc., 18702 N. Creek Pkwy., Bothell, WA 98011, (206) 483-8088; Western Digital, 2445 McCabe Way, Irvine, CA 92714, (714) 863-0102.

## Two-Line Telephones

### Select the Best Phone for Your Needs with Our Reviews and Shopping Guide



good telephone is the cornerstone of any home office. And for anyone who works at home on a regular basis, a good telephone means a good two-line telephone.

With two phone lines, callers are less likely to receive annoying busy signals. If you're on one line, a second incoming call may bounce to the second line; you can put the first caller on hold and take a message, or you can let an answering machine take a message. With two phone lines, you can send or receive a modem or fax transmission on one line and make or receive a voice call on the other. And, of course, one phone line can be designated for family calls, another for business.

Besides the obvious advantages of a second phone line, two-line telephones themselves have advantages over one-line phones. Many of the features offered through local phone companies at an extra charge—and accessed by using the receiver hook and combinations of the numbered, \*, and # keys—are built into two-line phones. With many two-line phones, you can conduct a three-way conference call. Hold and speed dialing are also built-in features.

If you have one phone line now coming into your house, the phone company in some cases can convert it to two lines without physically running another line into the house. In this case you'll have only one wall jack, and will need a line splitter to connect a fax machine or modem. Some people might want a separate second line installed, especially if it would go into a new part of the house.

#### **TWO-LINE PHONE FEATURES**

Two-line telephones vary in their style and features offered. Choosing a phone from the

growing array available can be confusing. Some factors to consider are reputation, service, warranty, and features.

Try to avoid purchasing a phone from an unknown manufacturer—you don't want to risk your business on equipment that may be unreliable. Also look for a long warranty, or purchase from a store that has a good service policy and will, for example, lend you a phone while yours is being repaired. Even reputable companies sometimes let a bad phone slip through to the stores, and you can't afford to be without a phone while it is being serviced.

Finally, look at the telephone's features. Most two-line phones have many of the features described here, making your commu-

STEVE USDIN, a freelance writer living in Washington, D.C., wrote "Buyer's Guide to Fax Machines" in our November 1988 issue.

nications more convenient and hassle-free. Line Status Lights. These lights indicate which lines are ringing, busy, or on hold. Incoming Call Identification. The phone should have distinctive ringers and/or flashing patterns to indicate which phone line is ringing. Conference Calling. This is one of the features telephone companies provide to some users for an additional charge but that many companies have built into their two-line phones. With the touch of a button, three people can be connected in one conversation.

A word of caution: Some phones with this feature permit only three-way conversations among internal extensions, not among outside lines.

**Hold.** All models provide a hold button.

**Redial or Last Number Dialed.** With the push of one button, the phone automatically redials the last number dialed. Some phones contin-

ue to redial every 30 seconds or so for as long as there is a busy signal.

**Flash.** Pressing FLASH has the same effect as pressing the receiver button and is used for accessing phone company services, such as call waiting, that might not be available on the phone.

**Mute.** Turns off the mouthpiece so you can listen to a call without being heard. This feature will prevent the person on the other end from hearing the sounds of children, dogs, or printers.

**Auto-dial Memory Buttons.** Separate buttons automatically dial the numbers that you assign them. Look for a phone that can accommodate at least as many phone numbers as you dial frequently. Most phones include a replaceable paper tag next to each button so that you can relabel them easily.

**Speakerphone.** This is one of the most seduc-

tive telephone features. Besides allowing everyone in a room to hear and participate in a conversation without picking up a phone receiver, it allows hands-free operation so you can do other things during the call. Speakerphones are also useful for on-hook dialing. Some models don't include a microphone, making only on-hook dialing possible.

**Tone Button**. All two-line phones have tone/ pulse switches so that you can dial through either type of system. Some phones also have a TONE button, which can be used when dialing from a pulse-dialing area to the touch-tones required by corporate voice-mail systems and automatic-ordering systems.

**Volume Control.** Phones may permit you to adjust the ringer, speaker, or handset volume. The latter feature is particularly useful if you get a bad connection.

#### **BUYER'S GUIDE TO TWO-LINE TELEPHONES**

What follows is a guide to 18 of the best two-line corded telephones under \$180. All are manufactured by reputable companies and should be readily available nationwide.

		<b>Auto-Dial</b>				BUTTONS				Speaker-							
200000000000000000000000000000000000000	ist Price	Memory		Conference		THE RESERVE THE PARTY OF THE PA	Mute	Redial	Pause	phone	Keypad	Control	Ringers	Mounting	Compatible	(Years)	Comments
AT&T 412	\$130	12	Y	Y	Y	Y	Y	Y	N	N	Y	Н	Y	W/D	Y	2	Tone button, reviewed on page 59
BellSouth 2000	\$160	200	Y	Y	Y	Y	Y	Y	N	Y	N	S	Y	D	Y	1	LCD display, auto-dial by name entry <sup>1</sup>
Supremacy 470	\$110	20	Y	Y	Y	Y	Y	Y	Y	Y	N	S,R	Y	W/D	Y	2	On-hook dialing
GTE 2306	\$ 85	40	Y	Y	Y	Y	N	Y	Y	N	N	R	Y	W/D	Y	1	Scratch-Pad <sup>2</sup>
2355	\$115	40	Y	Y	Y	Y	N	Y	Y	Y	N	S, R	Y	W/D	Y	1	Scratch-Pad <sup>2</sup> , auto-busy redial <sup>3</sup> , reviewed on page 59
NorthWestern Bell Techline 2702S	\$100	27	Y	Y	Y	Y	Y	Y	Y	Y	N	R	Y	W/D	Y	2	Reviewed on page 59
EasyTouch Two Line	\$ 70	10	Y	Y	N	Y	N	Y	N	N	N	R	Y	W/D	Y	2	Two emergency speed-dia buttons
PacTel FE-5300	\$110	20	Y	Y	Y	Y	Y	Y	Y	Y	N	R	Y	W/D	Y	3	Auto-busy redial <sup>3</sup>
Panasonic KX-T3122	\$ 95	26	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	W/D	N	1	MemoDial <sup>2</sup>
KX-T3142	\$125	26	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	W/D	N	1	MemoDial <sup>2</sup>
KX-T3145	\$115	48	Y	Y	Y	Y	Y	Y	Y	Y	N	S	Y	W/D	N	1	MemoDial <sup>2</sup> , microphone, reviewed on page 59
KX-T3155	\$127	48	Y	Y	Y	Y	Y	Y	Y	Y	N	S	Y	W/D	N	1	MemoDial <sup>2</sup> , LCD display microphone
Radio Shack DUOFONE System 19	5 \$160	30	Y	Y	Y	Y	Y	Y	Y	Y	N	R, S	Y	W/D	Y	i	Auto-busy redial <sup>3</sup> , LCD display
DUOFONE System 20	8 \$100	20	Y	N	Y	Y	N	Y	Y	N	N	R	Y	W/D	Y	1	Intercom, paging
DUOFONE System 2	0 \$100	33	Y	Y	Y	Y	Y	Y	Y	Y	N	R, S	Y	W/D	Y	1	Expandable up to five extensions
Sanyo ADX 460	\$140	30	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	W/D	Y	90 days	Saves busy numbers for future redial
ADX 660	\$100	30	Y	Y	Y	Y	N	Y	Y	Y	N	S	Y	W/D	Y	90 days	LCD display, auto-busy redial <sup>3</sup>
Southwestern Bell FD-8000	\$180	150	Y	Y	Y	Y	N	Y	Y	Y	N	R	N	W/D	Y	1	LCD display, can store up to 1,761 numbers and letters, auto-dial by name entry <sup>1</sup> , reviewed on

**KEY:** H = Headset volume control; N = No; R = Ringer volume control; S = Speaker volume control; Y = Yes; After you type in the desired name, the phone automatically dials the corresponding number. Lets you enter phone numbers into memory during a phone call; Telephone automatically redials number when line is busy.

CHART COMPILED BY MARIE ALVICH

#### **MANUFACTURERS**

AT&T (800) 222-0300; Bell South (800) 235-5273; GTE (203) 965-2000; NorthWestern Bell (800) 822-1000; PacTel (800) 426-2372; Panasonic (201) 348-7000; Radio Shack (817) 390-3300; Sanyo (201) 440-9300; Southwestern Bell (800) 558-7347.

**Display.** Although LCD displays are more common on larger phone systems, some phones display such information as the number you have just dialed, the duration (minutes and seconds) of your call, and the time and date

#### **ACCESSORIES**

Once you have decided which phone to

purchase, consider the following accessories. They won't add features or improve sound quality, but they will make using the telephone more convenient.

**Handset Cords.** Avoid a too-short cord that causes you to yank your phone across or off your desk. Cords seven feet or longer are better than the four-foot cords that come with many phones.

**Headsets.** These aren't just for receptionists. They are good for anyone who spends a lot of time on the phone, or may want to have his/her hands free for typing or taking notes.

**Shoulder Rest.** This item (usually under \$5) is one of the best buys for your home office. A shoulder rest allows you to cradle the phone on your shoulder for long periods without straining your neck and shoulder muscles.

### Two-Line Telephone Reviews

#### **Five Top-Rated Two-Line Telephones**

The following five two-line telephones received high marks for sound quality and features. Together with the chart, these reviews should help you decide on the right telephone for your business.

#### NorthWestern Bell Telephones Techline 2702S

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$100

This unit packs all the features you are likely to need in a two-line telephone into a compact package. The small footprint makes it well suited for crowded desks. Speaker, mute, and conference calling work well and are easy to use. The auto redial is useful in conjunction with the speaker; it allows you to continue working while the telephone recalls busy numbers up to 10 times. Fire, police, and hospital numbers can be programmed to correspond to labeled buttons, along with 24 other one-touch numbers. A FLASH button facilitates use of call waiting and other custom-calling features. Each line has separate ringer control and LED indicators. This telephone was the best of the five reviewed and a pleasure to use.

#### Southwestern Bell Freedom Phone FD 8000

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$180

Besides all the two-line features you would expect, the Southwestern Bell Freedom Phone FD 8000 also includes an integrated personal telephone directory. You can store numerous names and telephone numbers in the unit's memory, look them up alphabetically, and dial them with the touch of a

button. The FD 8000 can store 1,761 numerals and letters in its memory. This memory is allocated to numbers stored for one-touch dialing as well as to the personal directory, so how many numbers you can store depends on how long the names and numbers are and how many one-touch numbers are used. The major drawback to this phone is its size; it has a 48-key keypad and is about twice the size of most two-line telephones.

### Panasonic KX-T3145

RATING: \* \*

SUGGESTED RETAIL PRICE: \$115

Panasonic's KX-T3145 is a quality two-line phone with all the basic features. It has a hold button, and each line has its own ringer tone and line status light that will appear red or green depending on whether the line is on hold or ringing. A conference button allows you to talk on both lines simultaneously, creating a three-way conference call. You can plug the phone into a two-line wall jack or connect it to two single-line jacks with a simple line splitter.

Other features include a speakerphone with mute; 48-number memory; automatic redial, which saves a number and automatically redials it up to 15 times if it is busy; and a Memo Dial feature that allows you to key a phone number into the phone's memory while you talk (neither party will hear the tone of the buttons being pushed).

### AT&T Two-Line Telephone 412

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$130

The Two-Line Telephone 412 is just what you would expect from AT&T. The sound quality is as clear as a bell, and it includes most of the features you need in a two-line

telephone.

One particularly useful feature is the tonecontrol button. When you encounter a corporate voice-mail system and are asked for a touch-tone code, press TONE and the code. Otherwise, you are left waiting for an operator while long-distance charges mount.

One odd aspect of the phone is that it has only one jack. The line from that jack plugs into a two-line jack that goes into the wall. If you want to use one line for a facsimile machine, as I do, and *also* connect this line to an outgoing phone line for voice calls, you'll need yet another two-line jack or Y-adapter. The adapter is an inexpensive Radio Shack or AT&T Phone Center item, but the need for such an adapter points out that the phone designers didn't think through all the details. A speakerphone would make this a perfect phone.

#### GTE 2355

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$115

The GTE 2355 is very similar to the Panasonic KX-T3145. The GTE 2355 lacks a few of the Panasonic's features, however, and the feel of the buttons and the casing is not quite as good. It comes with a power cord, which must be plugged into the wall for proper operation. Unlike the Panasonic, it does not have a separate ringer control and tone for each line. The line status lights flash red only, at different speeds to indicate whether a line is in use or on hold.

The GTE's automatic redial is a nice feature; once activated, it will call back a busy number up to 10 times, automatically turning on the speakerphone and hanging up if a call comes in on the second line in the meantime.

Like the Panasonic, it has a ScratchPad for keying a number into the memory during a phone call. However, this number must then be transferred into one of the 40 speed-dial memory locations, which means you will have to keep one location free for such transfers.

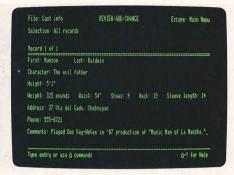
## Everything isn't what it used to be.



With a word processor, spreadsheet and database in one package, AppleWorks has just about everything an Apple II owner could want.



You can jump from one program to another in the blink of an eye. Which makes AppleWorks an exceptional choice for fast-paced businesses.



AppleWorks is the best-selling Apple software of all time. And if you own an Apple IIe or IIc, you still can't buy a more powerful program.

When AppleWorks® rocketed to the top of the best-seller lists a few years back, Apple II owners thought they had seen everything.

They were right. AppleWorks contained every program you could possibly want in just

one program. And exercised the power of the Apple II like it had never been exercised before.

But then came the Apple IIGs. With more power and new capabilities. Everything had changed. And Apple IIGs owners wanted more.

A program with everything AppleWorks has. And everything else, too.

## Now it's more.



Like AppleWorks, AppleWorks GS offers a powerful word processor. And you can enhance your work with type styles, sizes and fonts.



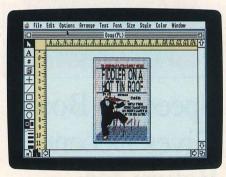
AppleWorks GS can read all your AppleWorks files. And when you transfer your spreadsheets to AppleWorks GS, you can add boldface.



The database lets you store and sort thousands of business, school or home records. And now you can use a mouse and pull-down menus.



A graphics program that seamlessly combines bit-mapped painting and object-oriented drawing capabilities will leave Macintosh users jealous.



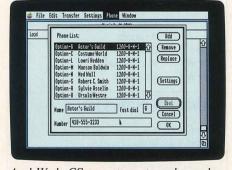
AppleWorks GS includes the most powerful Apple II page-layout program you can buy. Put all the pieces together. Then publish them.



A spell checker with an 80,000-word dictionary is built in. Ditto for a thesaurus that can make you more articulate, eloquent or perspicuous.



What you see is what you get. Because any Apple ImageWriter or LaserWriter printer prints what you see on the screen exactly how you see it. Automatically.



AppleWorks GS supports most popular modems to let you send and receive files via telephone.

#### Introducing AppleWorks GS.

Six powerful programs in one easy-to-use package. Six programs working together to exploit the full resources of the Apple IIGs.

There's even a deal in the works for owners of AppleWorks, MultiScribe and MultiScribe GS.

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#### Upgrade to AppleWorks GS and save. We'll even pay for the phone call. Dial 800-

544-8554 to get your upgrade kit now. And soon you'll have everything going for you again.



## A Range of Hardware Options For the Home Office – from Accelerator Card to Speakerphone

#### **About Our Reviews and Ratings**

Each month, HOME-OFFICE COMPUTING'S Hardware Reviews take an in-depth look at new and worthwhile computers, peripherals, facsimile machines, copiers, phones, and other hardware.

Our reviewers set up the equipment in their own home offices. After heavy use and extensive testing, they rank each item on the basis of suitability for the home office and on overall value, taking into account performance, features, ease of setup, ease of learning and use, documentation, size, expandability/versatility, support, availability, warranty, and value for the money.

Then, the HOME-OFFICE COMPUTING Hardware Testing Lab conducts its own battery of tests (a printer speed test, for example) and verifies manufacturers' specifications. Finally, our technical editors combine the reviewers' rankings, the lab test results, and their own experience and judgment into an overall rating on a scale of zero to four stars:

Poor
 ★ Average
 ★★ Good
 ★★★ Excellent

#### **REVIEWED IN THIS ISSUE**

Speed-up Card:

Orchid TwinTurbo 12

Disk Drive:

Iomega Bernoulli Box II

**Display System:** 

Relisys VGA/Multiscan Monitor Bundle

Monitor:

NEC MultiSync GS

Printer:

Office Automation Systems LaserPro Express

Series II

Fax:

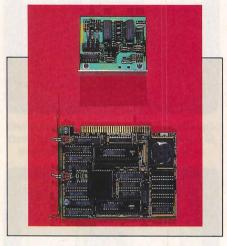
Olympia Olyfax 100

Copier:

Canon PC-7

Phone

AT&T Speakerphone 480



#### Speed-up Board Gives Decent Return for Your Money

#### **Orchid TwinTurbo 12**

Orchid Technology, 45365 Northport Loop W., Fremont, CA 94538; (415) 490-8586

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$645

MICROPROCESSOR: 80286 (12MHz); switchable to your 8088 for compatibility

MEMORY: 8K

HARDWARE REQUIREMENTS: IBM PC/XT or compatible with 8088 or V-20 microprocessor

SOFTWARE: Disk cache, RAM disk, print spooler, date/time display, high/low speed control

DIMENSIONS: PC half length (6.3-by-4 inches)

OTHER HARDWARE INCLUDED: Twin Booster board (requires 8088 or V-20 microprocessor and a 4.77MHz clock speed)

WARRANTY: Four years

The Orchid TwinTurbo 12 is a two-board system that gives your PC or XT compatible some of the pizzazz of an 80286 machine.

The first board, the TwinTurbo, looks like any half-length expansion card. It houses a 12MHz 80286 chip and sockets for your

present 8088 chip and an optional math coprocessor. It is fairly easy to install this board. First, you pry the 8088 out of its system-board socket and plug it into the TwinTurbo. Next, you plug a cable into the old 8088 socket and attach the other end to a connector on the TwinTurbo. Finally, you install the card in an available slot. The factory settings for the board's various jumpers will work in most cases, but you may have to make a change or two. A toggle switch on the rear lets you switch to the 8088 chip if you have an older program that won't run properly at the higher speed.

The Turbo Booster is a second card that can be installed, without needing an additional slot (it attaches to the computer's chassis). It adds a hardly noticeable 10 to 20 percent speed boost over the TwinTurbo board. It must be noted, however, that the Turbo Booster board is unusable with computers in which the basic clock speed is higher than 4.77MHz. This rules out many computers with "turbo" system boards. Another drawback is that you must pull a second chip (the 8284 clock chip) and replace it with a connector cabled to the booster board. If this chip is resting in a socket in your computer, it's not a big deal to pull it out and plug in the connector. But if the chip has been soldered onto your system board, as is often the case, you may need professional assistance.

Included in the Orchid software package are various useful utilities (such as print spooling, RAM disk, disk caching, time display, alarm clock) and a hot-key program to take care of system functions. A separate manual is provided for the software.

Using the TwinTurbo system with a wide variety of applications software—word processors, database managers, and the like—produced no glitches in program operations or disk access. You become oblivious to the presence of the new hardware almost immediately, adjusting to the higher speed and eventually growing a little dissatisfied as you begin to think about ways of computing even faster!

—HENRY F. BEECHHOLD

CIRCLE READER SERVICE 101



#### THE \$29 TAX RETURN SOLUTION.

Here's the solution to your 1988 personal federal income tax return. Prepare it yourself with this easy-to-use CPA designed program. Let Personal Tax Preparer's "on-line" help, plus easy-to-follow menus and screens guide you every step of the way through your 1988 federal tax return.

The 1989 Personal Tax Preparer will calculate and print your 1988 federal income tax return including: Form 1040, Schedules A, B, C, D, E, R, SE, and more.

#### It also features:

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- Pop-up "on-line" help windows that provide explanations, relevant IRS Publication numbers and toll free IRS Tele Tax numbers.
- Three "IRS Approved" pin feed 1040 forms.
- A pop-up arithmetic calculator.
- A pop-up note pad.
- A financial calculator that figures interest rates, loan payments, balloon payments, loan balances, interest earned, savings and investment future values.
- Prints amortization and accumulation schedules.
- A 1989 Tax Planner.
- Not copy protected.

Whether you do your own return, want to check on your tax preparer, or, would like to plan your 1989 tax situation, Personal Tax Preparer is for you.

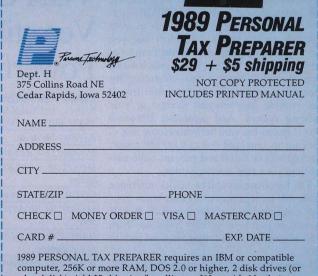
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a hard disk). Add \$5 shipping/handling - \$10 outside North Amer-

ica. Iowa residents, please add 4% sales tax.



375 Collins Road N.E. Cedar Rapids, Iowa 52402

## An Infinitely Expandable Hard Disk?

Iomega Bernoulli Box II

Iomega Corp., 1821 W. 4000 South, Roy, UT 84067; (801) 778-3000

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$1,450

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible; IBM PS/2 or compatible

NUMBER OF DRIVES: One

CARTRIDGE DIMENSIONS: 5.4-by-5.4-by-5.3 inches

STORAGE: 20MB per cartridge

ACCESS TIME: 40 ms

SOFTWARE INCLUDED: Setup and utilities

DIMENSIONS: 3.1-by-14.4-by-14.9 inches

WARRANTY: One year

Put simply, the Bernoulli Box II is a floppy disk with 20MB of storage. This might sound impossible, but it's not. Iomega's "Removable Disk Cartridge Drive" combines the removability of floppy disks with the high capacity and speed of hard-disk drives. There really is no difference in operation between a hard disk and a Bernoulli disk. Iomega's Bernoulli Box II is the current version of this well-proven auxiliary storage/data backup subsystem.

The Bernoulli Box II has an average access speed of 40 milliseconds (a respectable if not blazing hard-disk speed). And because the cartridges can hold up to 20MB, it is feasible to use a Bernoulli Box II as your primary storage system. The fact that you can remove and sequester your data can be of immense value. You can easily take it home from the office every night-enhancing the security of your data. The Bernoulli Box II can provide supplemental storage to your existing system. And using the Bernoulli Box II makes the vital but bothersome task of backing up your hard disk quicker and easier. Backup will be faster and perhaps more useful than via a tape-backup system.

The four manuals and two quick-reference cards that Iomega provides cover many popular configurations of the Bernoulli Box II system. Expect to be initially confused. With a bit of patience, you'll find the right path to take.

Iomega also provides a menu-driven utility program that can turn the Bernoulli Box II into a data backup/restore system. The program also provides copy, format, install, and partition routines.

Adding a Bernoulli Box II to your computer is almost the equivalent of having an infinitely expandable hard disk. When one



20MB cartridge is filled to the brim with data, just take it out and replace it with another one. And, while you'll probably justify the purchase of a Bernoulli Box II as a backup system, you'll soon be using it as if it were an additional hard-disk drive. Of course, the cartridges (\$83) are more expensive than floppies, but on a per megabyte basis, the cost is comparable.

A double-drive Bernoulli Box II system (\$2,350) will provide even easier backup, but it won't be cheap. And, because a single-drive unit effectively adds limitless hard-disk storage, the extra cost of a double may seem extravagant.

Iomega warrants the Bernoulli Box II for one year and offers a one-year extension for \$129. The company provides technical support via telephone (during business hours) and a 24-hour electronic bulletin board service ([801] 778-4400—up to 2400 baud).

—HENRY F. BEECHHOLD CIRCLE READER SERVICE 102

## Monitor and VGA Card: A Versatile, Powerful Pair

**Relisys VGA/Multiscan Monitor Bundle** 

Relisys, 320 South Milpitas Blvd., Milpitas, CA 95035; (408) 945-9000

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$1,045

MONITOR SCREEN SIZE (DIAGONAL): 13 inches

DOT PITCH: 0.31mm

MAXIMUM MONITOR RESOLUTION: 800-by-560

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible

MONITOR DIMENSIONS: 15-by-13.4-by-14.6 inches

MONITOR WARRANTY: Two years

GRAPHICS CARD TYPE: VGA

VIDEO CARD MODES SUPPORTED: MDA, HGC, CGA, MCGA, EGA, VGA, 800-by-600 (16 colors), 1,024-by-768 (16 colors), 132-column mode CARD DIMENSIONS: PC half length (6.3-by-4 inches)

ADDITIONAL FEATURES: 8 software fonts, 3 windows with Zoom, hardware horizontal pan/vertical scroll

ACCESSORIES INCLUDED: 9-pin-to-15-pin adapter

CARD WARRANTY: One year

Although Relisys monitors are compatible with a variety of video interface boards, the company is employing a common marketing technique known as bundling. Through an arrangement with Orchid Technology, Relisys packages several monitors with Orchid's top-of-the-line VGA card and sells them for less than the sum of the individual prices. The Multiscan/VGA combination, which can communicate via standard RGB signals (for EGA and lower) as well as analog signals (for VGA), is said to be adaptable to almost any piece of software running on an IBM or compatible computer.

The two units are matched to run right out of the box, so all you have to do is insert the video card in a spare expansion slot and attach the interface cable to the monitor. Orchid's VGA card can even work if there is a second video card installed on your com-



puter, but you must reconfigure it to do so. The manual explains the various possibilities and appropriate switch settings.

For a color monitor, the Multiscan is impressive. *PC Paintbrush*, for example, is as sharp and vivid as I've seen it on any color monitor. Maximum screen resolution is 800-by-560 pixels, a figure high enough to allow a sharp, readable display of 132 columns by 44 lines. As you would expect, the characters are quite small in this mode, but there is something to be said for getting this much information on a single screen. (Of course, you probably don't want to spend too many hours looking at such densely packed text.)

The landscape-oriented tube measures a bit over 13 inches diagonally, and the display is rock solid—no ripples or jitter. Both the monitor and the VGA card performed admirably and consistently. I encountered no problems—even when running the monitor with another brand of VGA card. In fact, because it's a variable-scan-rate monitor

#### HARDWARE

(like NEC's MultiSync series), it will automatically adjust itself to work with just about any video adapter.

Unlike many monitors, the Multiscan has a wealth of user-accessible controls. Not only can you adjust for contrast, brightness, horizontal width ("stretch effect"), vertical size, vertical hold, and horizontal and vertical position on a panel hidden behind a trap door in the side of the monitor, but there is a switch-selectable monochrome mode, in which you can choose any one of the 7 primary IBM text colors. The actual color choice is made with a 5-switch bank on the back panel, which also houses a switch for input selection (multiscan or manual).

To use the enhanced display features with Windows, CAD programs, desktop publishing packages, various word processors, spreadsheets, and other programs, you have to install the appropriate video drivers from those supplied on the Relisys Utilities and Drivers disk. A simple menu takes you through the process. There are also utilities for editing fonts and changing display characteristics (for example, switching from 80 columns-by-25 lines to 132-by-44). And with Hotkey & Hotzoom, a RAM-resident program, you can zoom, pan, and scroll graphics programs like AutoCAD at the touch of a key.

The Orchid VGA card is by no means restricted to the Relisys Multiscan. It is configurable for a wide range of monitors, both RGB and analog. A 9-pin-to-15-pin adapter is provided to allow you to hook up the Multiscan's 9-pin cable to a 15-pin analog connector.

The VGA/Multiscan Bundle lists for \$1,045, not cheap but not exorbitant—and a \$274 savings over the prices of the monitor and card individually. This is a versatile package, one that should meet all but the most demanding needs.

> HENRY F. BEECHHOLD CIRCLE READER SERVICE 103

#### **NEC Multisync** GS: More Than Just Black And White

**NEC MultiSync GS** 

NEC Home Electronics (U.S.A.) Inc., 1255 Michael Dr., Wood Dale, IL 60191; (312) 860-9500

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$279

SCREEN SIZE (DIAGONALLY): 14 inches

DOT PITCH: 0.31mm

MAXIMUM RESOLUTION: 720-by-480

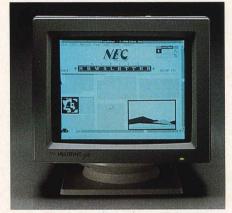
HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatibles, with MDA, HGC, CGA, EGA, or VGA display card; or IBM PS/2

OTHER HARDWARE INCLUDED: 9-pin-to-9-pin cable, 9-pin-to-15-pin adapter for IBM PS/2, tilt/ swivel base

DIMENSIONS: 14.2-by-14.7-by-16.1 inches WARRANTY: Two years parts; one year labor

It has long been the theory that when purchasing a monitor for an MS-DOS computer. you should get a monochrome display for text applications and a color display for graphics. That theory got blurred as color monitors evolved to the point at which text on a good color monitor with the right video card could be nearly as crisp and sharp as on a monochrome display.

With the introduction of IBM's PS/2 computers, however, monochrome suddenly came back into its own. The new black-onwhite monitors have toned down the intensity of the white background by shading it closer



to gray than white. Other shades of gray serve to simulate color. (The "GS" in Multi-Sync GS stands for "gray scale," the name of this color-translation method.) The more shades displayed, the better the definition of the picture. The NEC can show 64 shades of gray—a range wide enough to display the many subtleties of even a complex, multicolored image.

Like the other monitors in the MultiSync line, the new MultiSync GS automatically adjusts to the type of video card installed in your computer and can grow with you when you upgrade your display card. If you have a monochrome card, you will see text that is sharp and clear. If you've moved all the way up to VGA graphics, you will see very impressive images produced in shades of gray. I generally don't care for black-on-white monitors but I fell in love with the MultiSync GS. Frankly, I was stunned at the quality of the EGA images generated by the NEC monitor.

With some monochrome monitors, even those that do a good job of simulating colors, graphics- or color-oriented software never looks quite as good as it does on even the

lowest level color monitor. I compared a number of color programs on a regular monochrome graphics monitor and the MultiSync GS. The programs looked far better on the MultiSync GS, even taking into account that the other monitors were green or amber. One of the games I tested looked even better in shades of gray than in color. If you're looking for a superior-quality monochrome display, the NEC MultiSync GS is an excellent choice. -STEPHEN MILLER

CIRCLE READER SERVICE 104

#### Nonstandard Language **Unleashes This** Laser's Power

Office Automation Systems LaserPro Express Series II

Office Automation Systems, Inc., 9940 Barnes Canyon Rd., San Diego, CA 92121; (619) 452-

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$2,495

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible or IBM PS/2

EMULATION: HP LaserJet Plus, Diablo 630, Epson FX-80, IBM Proprinter, NEC Spinwriter, Qume Sprint

**BUILT-IN FONTS: 14** 

SOFT FONTS: 13

PRINTER CONTROL LANGUAGE: Express

PAGES PER MINUTE: 8

PAGES PER MONTH: 5,000

MEMORY: 1MB (expandable to 4MB)

WARRANTY: One year

The \$2,495 LaserPro Express isn't cheapthese days, laser printers start at \$1,900. But it is a complete system; no enhancements are

The printer comes with 1MB of memory, eight status lights (for power, paper jam, and others), a Hewlett-Packard font-cartridge slot, a print density adjustment, a parallel and a serial interface, and a front-panel keypad.

The keypad programming system—used to specify print modes—is not exactly userfriendly. The two-character status indicator is made to do the job of a four-character display. To enter a code, you must find the first two digits by pressing a key that cycles through all available codes, and to find the second two digits, you press another key and repeat the process. It's tedious, and you're not likely to remember the codes from one

#### HARDWARE



day to the next. Fortunately, once you've got the printer set for your day-to-day operations, you won't have to bother much with the keypad.

Express, the built-in printer control language, is so extensive that given time and effort, you can use it as a document formatter; it provides total layout control as well as line graphics, shadings, bar codes, and customized fonts. For tight control over printed output, you may find it worthwhile to learn to use Express skillfully. You type Express commands directly into any ASCII text file. Express isn't as powerful as PostScript, the upper-end industry-standard printer control language used on Apple's LaserWriter; however, PostScript printers start around \$4,000.

Of course, you needn't bother with *Express* at all. And if you're happy with the way your software handles printing, and you've been using a Diablo 630, Epson FX-80, Qume Sprint, or NEC Spinwriter, you can set the LaserPro to emulate your existing printer—or the Hewlett-Packard LaserJet Plus, possibly the laser printer most widely supported by MS-DOS software. The LaserJet emulation is complete, right down to the LaserPro's ability to accept Hewlett-Packard font cartridges and soft fonts.

Built-in type styles are Line Printer, Courier, Elite, and Vetica (same as HP's Helvetica), constituting 14 fonts (various sizes and weights). In addition, two disks of soft fonts are included: IBM Proprinter (eight) and Epson FX-80 (five).

The printing speed of the LaserPro falls a little short of the claimed eight pages per minute—as do the speeds of nearly all laser printers. And while the print quality is generally good, the paper comes out looking off-white. Even with the print density set at the lowest position, the LaserPro prints a faint haze. Yet, in order to get a good shaded box under Hewlett-Packard emulation, you have to boost the density, which also darkens the haze.

The LaserPro Express Series II is a well-made, feature-packed printer providing a marked improvement in print quality over any dot-matrix printer. If, however, you're buying it primarily for Hewlett-Packard em-

ulation, you'd be better off with the real thing. The emulation works, but the print quality does not meet Hewlett-Packard standards. However, if you're willing to put in the effort, the LaserPro printer control language is one of the best around and can be made to do just about every printing trick in the book.

—HENRY F. BEECHHOLD

CIRCLE READER SERVICE 105

#### Olyfax 100: Not Worth The Trouble

Olympia Olyfax 100

Olympia USA, Inc., P.O. Box 22, Somerville, NJ 08876; (201) 231-8300

RATING: ★

SUGGESTED RETAIL PRICE: \$1,795

COMPATIBILITY: Group 3

DOCUMENT WIDTH: 5.9-to-10.1 inches

RECORDING PAPER SIZE: 8.5 inches-by-98 feet (roll)

MODEM SPEED: 9600 baud (automatic fall-back)

PRINTING METHOD: Thermal

DISPLAY: 16-character LCD

RESOLUTION: Standard (203-by-98) and fine (203-by-196)

AUTOMATIC DOCUMENT FEEDER: 5 pages

FEATURES: 24-number one-touch auto-dialing, 88-number speed-dialing, automatic document-size reduction, activity reporting, voice reservation, copy mode, contrast and resolution control, terminal identification

DIMENSIONS: 13.2-by-10-by-3.2 inches

WARRANTY: 90 days

Although this facsimile machine has all the features you would expect on a basic model, it is flawed by poor documentation and awkward controls:



Remember when equipment manuals from Japan were written in an inscrutable language created by literally translating Japanese into English? Well, the Japanese have for the most part cleaned up their act. But Olympia, headquartered in Germany, hasn't. The manual, which doesn't read like something writ-

ten by a native speaker of English, is confusing and inaccurate.

Although most people will be able to discern the meanings intended by the devilishly written documentation, they will have trouble with the automatic document feeder. As with most moderately priced facsimile machines, the automatic document feeder isn't reliable. Paper jams are a matter of course.

Except for the copy function, features are selected by pressing a combination of a number key ("2" to toggle between fine and standard mode, for example), a function key, and the # key. Most machines in this price range have many one-touch operating features.

Overall, this machine has limited appeal. The absence of some features—delayed transmission (a must), polling, superfine mode, and a paper cutter—and the awkward style in which the features included operate make the Olyfax 100 difficult to recommend.

-STEVE USDIN

CIRCLE READER SERVICE 106

#### Full-Featured, High-Quality Canon Copier

Canon PC-7

Canon USA Inc., One Canon Plaza, Lake Success, NY 11042; (800) 652-2666

RATING: \* \*

SUGGESTED RETAIL PRICE: \$2,095

TYPE: Desktop copier

PAPER SIZE: Business card (2-by-3.5 inches) to legal (8.5-by-14 inches)

PAPER TRAY: 100 sheets

SPEED: 8 pages per minute

FEATURES: Automatic exposure adjustment, reduction and enlargement, up to 99 copies of a single original. Toner cartridge available in black, brown, blue, red, and green.

DIMENSIONS: 20-by-18.4-by-10.3 inches

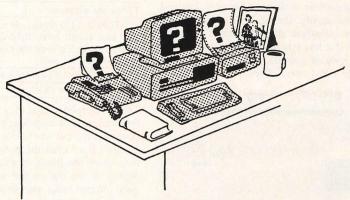
WARRANTY: 90 days

User-friendly and dependable are the best ways to describe the Canon PC-7 desktop copier. But this is not just a workhorse; it has a number of luxury features that are easy to operate from the front control panel.

With automatic exposure adjustment, you never have to worry about a copy coming out too light or too dark. Enlargement and reduction are easy, too: Simply press the Zoom key and adjust your copy size from 70 to 122 percent of the original with the + (plus) and - (minus) keys. These keys also control the number of copies—you can make up to 99.

The documentation is clear and well dia-

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PowerMate 1 Plus	\$2595	\$1675
PowerMate 2	\$2595	\$1675
PM Portable 286 w/20MB HD	\$3995	\$2399
LC 890 Laser Printer	\$4795	\$3260
P2200 Printer	\$569	\$347
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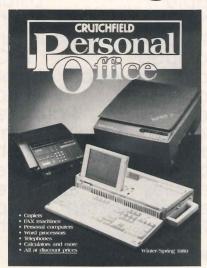
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#### HARDWARE

grammed; there was nothing I couldn't understand how to do once I read the manual.

Structurally, the copier is a delight. New toner cartridges slip in quickly; a manual-feed slot lets you make copies on the front and back of a single sheet; and the flexible-hinge copy cover gives you the ability to



copy pages from a thick book—though you might want to go easy on the cover. Likewise, the paper tray is light and should not be shoved or jerked about. The platen, or copy glass, is stationary, so the copier needs little space: You need about a foot of room on the left and right to remove and install the paper tray and to open the left cover to remove jammed paper.

Paper jams—about eight in four months—were the biggest problem I encountered. I cleared them all easily through either the left, right, or top cover, and copying resumed without a hitch. In most cases, I had overloaded the paper cassette or loaded paper with bent edges.

When I cranked up the PC-7 for the first time, the unit felt flimsy and slow in comparison to the industrial-strength office copiers to which many of us are accustomed. But the PC-7 proved durable, and \$2,095 is a lot less than the \$10,000 it takes to bring home the Canon laser copier that's the centerpiece of HOME-OFFICE COMPUTING's production department.

Any comparison with the corporate heavy-weights is forgotten the first time you swivel around from your computer to copy correspondence, forms, and memos. And eight pages per minute is a lot faster than trucking out to the copy shop or waiting a day for an assistant to return your copies.

—CHARLOTTE PIERCE
CIRCLE READER SERVICE 107

#### High-Quality Speakerphone From AT&T

#### AT&T Speakerphone 480

AT&T, 295 North Maple Ave., Basking Ridge, NJ 07902; (800) 222-0300

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$150

TYPE: Speakerphone

FEATURES: LCD display, 31-number speed-dialing, auto redial, hold, lighted keypad, volume control, call timer, mute, flash, tone/pulse dialing, ringer volume control

DIMENSIONS: 9.5-by-8-by-4.5 inches

WARRANTY: Two years

The speakerphone used to be a status symbol for occupants of corporate corner offices. I never figured out why; most of the time you couldn't hear what the person was saying. Now everyone has a speakerphone and the quality of the transmitted voice is still not good. Many make you sound as if you're mumbling through a load of gravel. The AT&T Speakerphone 480 has better sound quality than many other speakerphones but it's still nothing to phone home about. (An audio engineer will tell you that the problem can be solved only with an expensive, filtered, omnidirectional microphone.)

The other features of the 480 are superior to the voice quality. It has the capacity for one-touch memory dialing of 31 phone numbers, plus last number redial. Each number can be up to 16 digits long, as required by some long-distance carriers. I also like the fact that the first three slots on the supplied



phone-number card can be reserved for fire, police, and emergency services. The color-coded icons make it easy to see which button you need to press quickly. Putting in and changing numbers is straightforward, and the LCD display lets you see the string of numbers you're entering, making it easier to catch errors. Unfortunately, there isn't an edit function; if you enter an incorrect digit, you have to reenter the entire number.

The 480 is sturdier than many other phones. It stood up to several unintentional trips to the floor—the lightweight plastic case wasn't even scratched. A nice touch is a design that lets you use the 480 as either a desktop or wall phone.

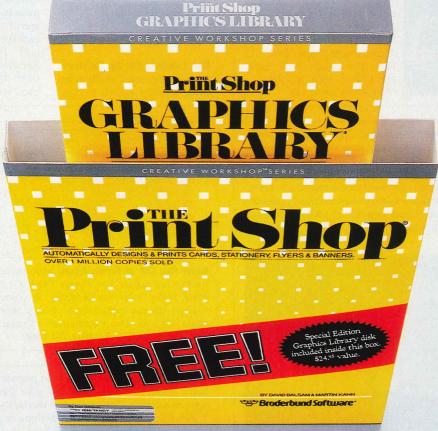
The Speakerphone 480 gets high marks for doing its job as well as or better than the other phones in its category.

—STEPHEN MILLER

CIRCLE READER SERVICE 108

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Wipe It Clean. Does it seem your computer screen accumulates dust, dirt, and static electricity every time you turn around? Screenwipe, a simple and convenient way to clean your computer screen, removes dirt, dust, and static charges, too. \$22.50 for a box of 50. From Aldine Technologies Inc., 315 Park Ave. South, New York, NY 10010; (800) 221-3043. CIRCLE READER SERVICE 109

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**Disk Labels to File By.** Use these color-coded, sequentially numbered *Diskette Labels* to orga-

nize and file your floppy diskettes. Preprinted numbers on the face of the diskette make identification and retrieval extremely simple. \$12 for a package of 120 3.5-inch labels or a package of 100 5.25-inch labels. From Dataware, 7570 Renwick, Houston, TX 77081; (800) 426-4844.

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MARIE ALVICH is associate technical editor for HOME-OFFICE COMPUTING.

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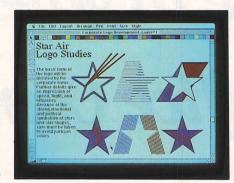
# Featuring MacDraw II—A Superb Update of the First Macintosh Drawing Program

#### Plus Desktop Publishing for The Apple II and Three MS-DOS Programs: A Simple Database, A Project Organizer, and Integrated Software with a Twist

Our reviews of applications software use shorthand to describe several of the details associated with any package. This is particularly true under "System Requirements"where the minimum system configuration is noted—so we have provided the following table of computers for you to refer to as needed. Hardware, software, and memory are required unless noted as "recommended" or "optional." When more than one computer is listed under "System Requirements," the machine marked with an asterisk (\*) is the type on which the software was reviewed. Requirements are not listed where obvious (for instance, printers with word processors or modems with communications programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher. Since most productivity software is not copy protected, we have indicated with the letters "CP"—only those programs that are copy protected. The version listed is the version reviewed; publishers may release subsequent versions at any time

Designation	Models
128K Apple	IIe/IIc/IIGS (in IIe/c mode) and compatibles
128Ke Apple	IIe (enhanced ROM)/IIc/IIGS(in IIe/c mode)
Apple IIGS	IIGS only
IBM PC, PS/2	PC/XT/AT, PS/2 and compatibles
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very Good; ★★★★ Excellent



A staggering variety of new features gives MacDraw II a collection of tricks not offered by many of its competitors.

#### MacDraw II

**VERSION REVIEWED: 1.0** 

SYSTEM REQUIREMENTS: 1MB Macintosh; two drives (hard-disk drive optional); System 5.0 or higher (6.0 recommended)

PUBLISHER: Claris Corp., 440 Clyde Ave., Mountain View, CA 94043; (415) 960-1500

PRICE: \$395

OVERALL PERFORMANCE: \* \* \* \*

DOCUMENTATION: \* \* \*

ERROR-HANDLING: \* \* \*

EASE OF USE: \* \*

SUPPORT: \* \* \*

MacDraw has changed over the years. If you dust off an early version from Apple, even if it could run on your current Mac, it would be almost unrecognizable next to MacDraw II from Claris.

Like any drawing program, MacDraw II deals with "objects"—computerized descriptions of the points required to create any shape. These collections of points can be copied, modified, moved as a group, then used to print out and display circles, rectangles, lines, and other shapes. The shapes can then, for instance, be filled with patterns, merged together, overlapped, and combined with text.

But explaining *MacDraw II* this way is like reciting your dog's DNA codes. The soul and personality of software become evident only when you get to know the package.

Normally, when I receive a new program, I don't use it for important or pressing proj-

ects. Fortunately *MacDraw II* arrived just after I moved, as I started laying out my new home office, and a quick tour of *MacDraw II* convinced me that it was a solid performer that would not only do everything I needed, but also had a collection of tricks not available in any competing program on my shelf.

I wanted to create an architectural scale drawing (one inch equals four feet). *MacDraw* provides this as one of its eight standard scaling options, and you can create custom scales if you need them.

My office layout, when drawn in the chosen scale, was bigger than my Mac's screen. No problem, however; documents can be up to 69 square feet. Big drawings can be printed full size on a plotter or reduced for printing on smaller paper sizes.

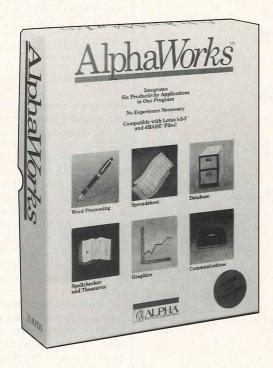
Any drawing can be set up with separate "views." For instance, you can draw your whole house as a single document, then set up a "living room view," a "kitchen view," etc. With that done, rather than scrolling through the entire house, you can blow up any small portion of the larger drawing in the blink of an eye.

MacDraw II let me place various parts of my floor plan into different layers of the drawing. For example, I wanted the walls in one layer, the furniture in another, the electrical wiring in a third, the plumbing in a fourth, the text in a fifth, and the dimensions in the sixth layer. This makes it possible to hide distractions (such as dimensions) when playing with items like furniture layout.

The program's color support quickly became a favorite feature. My Mac II's screen displayed the new office walls in blueprint blue, the furniture in black, the pipes in yellow, and the dimensions in magenta. This feature makes it easy to distinguish layers on a crowded screen. Those same colors could be printed on an ImageWriter II or an HP pen plotter. An impressive number of other printers and plotters are also supported. Since I don't own a color laser printer (who can afford one yet?), but I do have a standard black-and-white laser, I used different shades of gray to represent each color.

MacDraw II offers a staggering variety of line widths, styles, and fill patterns. If you don't see what you need, you can define your own lines or fills. My favorite line-drawing feature automatically draws lines with ar-

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#### SOFTWARE

rows on both ends. Keeping in mind the scale you've chosen, the program calculates the length of the line and displays its scaled dimension, properly centered on the line. So whenever I wondered how wide a doorway was, or how far the stereo speakers would be from my desk, I simply extended a line between the two points and read the scaled distance.

Space prevents further raving about the wonders of *MacDraw II*, but the high quality of my finished office layout speaks for itself.

—RON MANSFIELD

#### **Hold Everything!**

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 256K IBM PC, PS/2; two drives (hard-disk drive required for context-sensitive help); monochrome, CGA, EGA, or Hercules; 5.25- or 3.5-inch

PUBLISHER: Dac Software, 17950 Preston Road, Dallas, TX 75252; (214) 248-0205

PRICE: \$100

OVERALL PERFORMANCE: \* \* \*

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: \* \* \* \*
EASE OF USE: \* \* \*

SUPPORT: \*

Hold Everything! is a literal title. It lets you collectively store and selectively retrieve apparently unrelated data. The software doesn't care whether the information is a list of clients, friends, restaurants, or companies you do business with. It can hold them all.

Actually, Hold Everything! is a preconfigured database program. Each card or record is already defined like a blank form with 29 blanks or fields. Most fields hold text, such as name or address, but some are for dates, such as a birthday or date of last order. Several fields hold more than one piece of information that can be retrieved separately. For instance, an individual's name field has the first and last names as well as middle initial.

Two blank forms come in the same database—one for individuals and one for organizations. Each form's layout is essentially the same, but some field names differ. For instance, the individual form includes the person's title, but the organizational one asks for the company's product. Actually, none of this is final. You can rename any or all fields.

Because the database format is predefined, your applications are limited. But what the program does—such as name-and-address lists—it does very well. You either enter it directly from DOS or pop it up when you press ALT-3 or any other predefined key combination. Several techniques for interrogating the database make it easy to find information. Certain fields, such as the key-

#### SOFTWARE



Hold Everything!'s predefined database formats make it easy to store such basic information as names and addresses.

word field, are "indexed," which means they're arranged in an efficient order for locating data. For example, if the name field is indexed, the program would need to check only the records beginning with "J"—not all records—to locate Johnson.

Since Hold Everything! limits your options and protects you from hasty actions, it's hard to make a mistake. For example, if you take some step that might cause you to lose information, such as deleting records, the program asks you twice before it executes the function. The lack of options, however, can sometimes make the program more difficult to use. For example, when making mailing labels, it prints only in single-column format, and does not allow for three or four labels across. I also would have liked the chance to see my previously used keywords while entering data in a new record. For instance, I can never remember whether I described a person's occupation as "attorney" or "lawyer."

Still, the program couldn't get much easier to use. You can run it without the documentation—but don't, because the manual includes examples of screens and explains each function. Entering data is as easy as filling in the blanks, and there are several ways of finding your information once it is loaded.

If you encounter problems, you are provided with 10 minutes of free "getting started" telephone support. For additional help, you must subscribe to one of Dac Software's support plans (\$45 or \$75, for 30 or 60 minutes of help respectively, which must be used within one year of purchase). The plans include a toll-free number, newsletter, and notification of updates. Considering that you have to pay for the phone call to get your preliminary free support, I think the publisher offers only average help.

If you need a program that can replace your rolodex, your mailing label program, and/or your membership roster, you are a *Hold Everything!* candidate. Its predefined formats can save you from hours of aggravation trying to set up a more complex database program.

—BROOKS HUNT

#### **Power Desk**

**VERSION REVIEWED: 1.0** 

SYSTEM REQUIREMENTS: 384K IBM PC, PS/2; hard-disk drive; modem (for autodial); 5.25- and 3.5-inch

PUBLISHER: Software Studios, 8516 Sugarbush, Annandale, VA 22003; (703) 978-2339

PRICE: \$99 (plus \$5 shipping)

OVERALL PERFORMANCE: \* \* \*

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: \* \* \* \*

EASE OF USE: \* \*

SUPPORT: \* \* \*

Instead of a word processor with mail-merge, *Power Desk* is integrated software with a twist—a mailing-list program with its own word processor. In fact, it's a secretary on a disk, complete with a telephone dialer, a calendar, and an alarm clock.

Power Desk is a "like at first sight" program. Drop-down menus and an on-screen function-key menu made it possible for me to start it without glancing at the manual. However, the documentation is well organized, containing both reference material and a short but adequate tutorial.

Power Desk centers around its mailing list—a 16-field, fixed-format database that stores names, addresses, and phone numbers, plus other categories and notes. I was pleased to find that it could index each data field, meaning that records can be sorted quickly and selected in a variety of ways. For example, I use mailing list software to communicate with music students in my area. Power Desk's record-type field lets me use three-letter codes such as (VIO)lin, (CEL)lo, and (PIA)no to identify which individuals should receive invitations to violin workshops, and which to piano workshops. I can combine codes when more than one group is involved, such as when a string workshop will include both violin and cello students.

Output from the mailing list can be formatted into labels, reports, or form letters. Power Desk comes with one label style and one envelope format. However, I used the custom report utility to design additional formats, including a telephone list and a complete membership roster. In fact, the mailing list itself acts as an on-screen telephone directory, letting you dial directly from the screen with a single keystroke.

When I need to print several similar letters, it's easy to create a merge document. Each field in the mailing list has a two-letter code. I include these codes, marked with an asterisk, wherever I want to insert information from the list. *Power Desk*'s mail-merge facility isn't the most sophisticated I've seen; if the inserted information is too long for the line, *Power Desk* can't reformat at print

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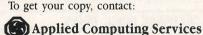
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Zip

#### SOFTWARE

time. Instead it simply wraps the line, leaving an odd-looking sentence stub in the letter. However, it can produce letters longer than a single page (up to 360 lines).

The *Power Desk* word processor can't compete with most stand-alones, but it does include all the important basics, such as block editing commands. You can set the spelling checker to beep each time it finds a word that's not in its dictionary, but I prefer



If customer contact is a large part of your business, consider Power Desk.

the "batch" spelling mode that checks the entire file upon completion.

The rest of *Power Desk*'s tools are similar to those found in pop-up desktop utilities, but they aren't available when other programs, or other *Power Desk* tools such as the word processor are in use. However, on their own they're a useful little collection.

My favorite is the scheduling and calendar module. It displays the current month along with a "to-do" list. As I finish items on the list and delete them, the program automatically appends them to a printable "done file." If I want reminders of appointments, I can enter those in a separate reminder file; days with reminder files are highlighted on the calendar. If I don't complete my schedule on a particular day, I can push the reminders to the next day. There is a timer with an alarm that keeps track of time while I'm using *Power Desk*. There's also a mathematical calculator—sorry, no advanced functions

with this, although it will calculate computer notations such as hexadecimal and binary.

Overall, *Power Desk* packs a lot of punch for the dollar. Most aspects of the program lack the power of stand-alone software of the same genre, but that's typical of integrated programs. If *Power Desk* falls short in such areas as the number of provided report and label formats, it goes the proverbial extra mile in the additional features it offers. If customer contact is an important part of your business, *Power Desk* could be a real time saver.

—TAN A. SUMMERS

#### **Springboard Publisher**

**VERSION REVIEWED: 1.1** 

SUPPORT: \* \* \*

SYSTEM REQUIREMENTS: 128K Apple\*; 512K IBM PC, PS/2; 1MB Macintosh; two drives (RAM disk optional); mouse; CGA and Microsoft Windows (IBM); System 4.2 or higher (Macintosh); 5.25- and 3.5-inch (Apple, IBM)

PUBLISHER: Springboard Software, 7808 Creekridge Circle, Minneapolis, MN 55435; (612) 944-3915

PRICE: \$140 (Apple); \$200 (IBM, Mac)

OVERALL PERFORMANCE: \* \*

DOCUMENTATION: \* \* \* \*

ERROR-HANDLING: \* \* \*

EASE OF USE: \* \* \*

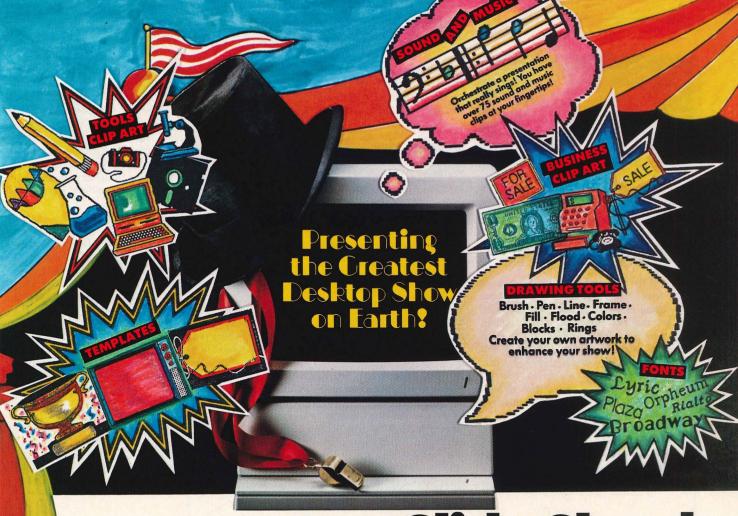
In the time-honored tradition of hardware-software finger-pointing, it was initially tempting to blame *Springboard Publisher* for faults which are in fact inherent to the system on which I reviewed it: the Apple II. This is patently unfair. Yet, when running any software, the system and the program become indistinguishable. If you harbor ideas of retrofitting your Apple II system for desktop publishing, this is a good program to consider. But remember, good software is only one component of a professional desktop publishing system; the computer and the printer must be near state-of-the-art also.

The program offers a considerable array of standard desktop publishing capabilities, including page layout (with several frame border options); numerous font options, such as boldface, italic, underline, outline, shadow, and several type sizes; a capable graphics creation program that mimics MacPaint; and access to a file of previously created graphics. Each feature is easy to access via pulldown menus and dialog boxes. Graphics and headlines can be moved throughout a document. All in all, the number of features is sufficient, and the flexibility in document creation seems more than adequate for most newsletter writing or simple desktop publishing operations.

The package's "Getting Started" manual, a helpful step-by-step tutorial, makes it a snap getting used to the program's features. The accompanying reference guide is also clear, clean, and well organized. I found myself quickly executing the sample document, and in the process I got the hang of using all the different software components.

But there's a hitch. Even though the program tried its best in every way to convince me it was running on a Macintosh, and not on an Apple II, the slow graphics processing of the II blew the software's cover. My fingers raced over the keyboard, as they do whenever I sit down to process words. But to my befuddlement, words would appear with critical letters missing. My text output began to resemble one of those "IF U CN RD THIS MSG, U CN GT A GD JB" ads. The text buffer, operating in the graphics mode, just couldn't keep up with my flying fingers. Scrolling from page to page was so slow that I wanted to tear my hair out. And this was not with the minimum configuration either; it was on a 768K Apple IIGS with a 3.5-inch drive and a RAM disk. I can only imagine the scene when a user with the minimum hardware configuration confronts this software for the first time: A mind-boggling number of disk swap instructions. A text buffer that accepts only occasional keystrokes. Scrolling so slow that entire sweaters could be

TITLE/PUBLISHER		SYSTEM	RA	TIN	IGS		
PRICE/VERSION	SUMMARY	REQUIREMENTS	0		EH	EU	S
Publish or Perish	Whether you need to create a full bibliography for a	512Ke Macintosh. Two	*	*	*	*	*
Park Row Inc.	paper or report, or whether you want to catalog	drives recommended.	*	*	*	*	*
4640 Jewell St., #101	books and periodicals, this predefined database can	System 4.1 or higher.	*		*	*	*
San Diego, CA 92109 (619) 581-6778 \$50 v3.0	make the job easy. In addition to the basic information (author, title, etc.), you can attach unlimited notes to each entry.  —Judith Zornberg		3000 <b>*</b> 3		*		
Textmate	The same menus that help when you start off with	256K IBM PC, PS/2. Two	*	*	*	*	*
Professional Software, Inc.	this word processor grow tedious to use over time;	drives (hard-disk drive	*	*		*	*
51 Fremont St. Needham, MA 02194	for instance, it takes four keystrokes to save a file.  However, the macro feature helps to automate such	recommended). 5.25-inch.		*		*	
(617) 444-5224	tasks. I wish the program let me "undo" changes						
\$195 v1.0	such as deleted text, but I'm glad it has mail-merge and a spelling checker.  —Brooks Hunt						



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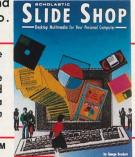
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#### SOFTWARE



As a well-organized desktop publishing program, Springboard Publisher seems to promise more than it can deliver on an Apple II.

knitted as the arrow travels from the bottom of the screen to the top. Not a pretty picture.

Speaking of pretty pictures, my hardware disillusionment extended to the printed output. Springboard Publisher displayed my page on the screen with great clarity and detail. But output on my ImageWriter II, even with a new ribbon, disappointed. I wished in vain for WYSIWYG, since the screen display showed a very appealing document. But the output was sadly unprofessional.

Again, unprofessional printed output is not necessarily the fault of the software. In fact, the publisher is to be commended for extending its compatibility backwards to a seven-year-old technology. At worst, the

software can only be blamed for raising expectations. And when used with a properly loaded system, *Springboard Publisher* is versatile, easy to learn, and quite powerful.

—DEBORAH KOVACS

#### Who-What-When

**VERSION REVIEWED: 1.07D** 

SYSTEM REQUIREMENTS: 512K IBM PC, PS/2 (640K recommended); hard-disk drive; DOS 2.1 or higher; 5.25- and 3.5-inch

PUBLISHER: Chronos Software, 1500 16th St., San Francisco, CA 94103; (415) 626-4244

PRICE: \$190

OVERALL PERFORMANCE: \* \*

DOCUMENTATION: ★ ★

ERROR-HANDLING: ★ ★ ★

EASE OF USE: \* \* \*

SUPPORT: \* \* \* \*

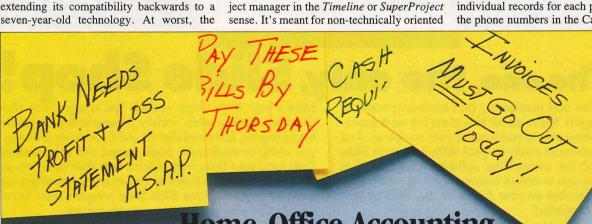
Chronos Software designed Who-What-When (people, projects, time) to help you organize all aspects of any project into a single coordinated structure—a kind of bird's-eye view of who's supposed to do what when. Strictly speaking, WWW is more of a personal time manager than a true project manager in the Timeline or SuperProject sense. It's meant for non-technically oriented

people who have no interest in mastering the intricacies of project management.

Although WWW can aid in the coordination of people and other resources to accomplish a task within a certain time period, perhaps it's best thought of as an interactive appointment calendar with a lot of supporting features. Its audible alarm (which is memory-resident) will come to life at preset times to remind you of tasks, appointments, and other daily details.

The program always starts at the Daily Calendar screen ("When"). Entries here are termed "tasks" and can be anything from a lunch appointment to participation in some-body else's project. There's room on-screen for a two-line description of a given task, but you can append up to 20 pages of memos to any task. These memos are saved as ASCII text, and you can export them to virtually any other program. A pop-up calendar will give you dates from January 1900 to December 2099. Two additional modules help organize time: the Weekly Overview summarizes your schedule, while the Meeting Maker coordinates various schedules.

The "Who" side includes three modules. People View lists those with whom you are working on one or more projects. This file acts as an index to Card File, a stack of individual records for each person listed. All the phone numbers in the Card File are auto-



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Macintosh, 512K, 512Ke, Plus, SE, Mac II; ImageWriter I, II, or LaserWriter (LaserWriter cannot print checks); and a minimum of 2 disk drives. Hard disk is required for Mac 512K and is recommended for others. Apple II version available without invoicing. Call for details.

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BASIC GAMES (107) Pacman, Lunar Lander, Startrek, Meteor, Breakout, and others. CARD GAMES (109) Canasta, hearts, draw poker & bridge. STRIKER (110) Defender-like game. "Top Gun" in space. FLIGHTMARE (112) Futuristic fighter pilot game. (Requires color graphics adapter.) SLEUTH (117) Who done it?

DND (119) Like Dungeon and Dragons

ROUND 42 (120) Better than Space Invaders. 42 levels. GAMES IN BASIC (124) Lander, biorhythms, desert, Phoenix, Star Wars, others. QUEST (152) Role playing

adventure fantasy game. (Requires CGA.)
SPACE WAR (158) Dogfight in outer space, using phasers,

photon torpedoes, etc.

BRIDGE PAL (171) Complete
game of contract bridge,

with tutorial.

FENIX (193) Just like the famous arcade game.

PINBALL GAMES (197) Pin-

PINBALL GAMES (197) Pinball, Rain, Twilight Zone, Wizard, etc.

**KID-GAMES (GAM8)** Animals math, clock game, alphabet, etc.

CHESS (GAM9) Incredible. 2D and 3D. Many levels. Play back moves, store games.



EGA RISK (GAM11) World domination in great color. Includes EGA Asteroids.

PC PRO-GOLF (GAM27-28)
Great graphics. Complete
18 hole, 72 par course. (CGA)
PEARL HARBOR (GAM32)
Shoot down Jap Zeros before
they destroy U.S. Fleet. (CGA)
ULTIMA 21 DELUXE (GAM34)
Best Blackjack game around.
Includes Video Poker.

FORD SIMULATOR (GAM37)
Great driving simulation.
(CGA)



#### MUSIC

PIANOMAN 3.2 (301) Turn your keyboard into a piano. PC-MUSICIAN (302) Compose, save, and play music. CHRISTMAS SONGS (311)
Play your favorites on a PC.

#### WORD PROCESSING

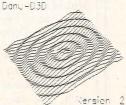
PC-WRITE 2.71 (401-402) (2 disks) Latest version of this popular program w/spelling checker

PC-TYPE+ (421-423) (3 disks) Excellent. Includes mail merge, 100,000 word spelling checker. Interfaces with PC-File+, PC-Style.

MAXI-MAX (432) 59 macros to use with Word Perfect 4.2 or later. 11 templates for forms, border designs, etc.

#### **GRAPHICS**

KEYDRAW CAD SYSTEM (1001, 1002, 1065) (3 disks) Popular. Also uses mouse. (Requires color graphics - CGA.) DANCAD 3-D (1051, 1052) (2 disks) Create 3-D graphics. Rotate, magnify, etc. Runs on CGA, EGA, or Hercules.



**SIDEWAYS** (1007) Prints text sideways. Useful for spreadsheets.

SIMCGA/HGCIBM (1027, 1062) (2 disks) Use with Hercules graphics card/compatibles to run programs requiring CGA on your monochrome PC.

IMAGE 3-D (1048) Create and edit 3-D objects. Move, scale, rotate and tip image. FINGERPAINT (1050) Use keyboard or mouse to draw. Like MacPaint. (Requires CGA or EGA.)

FANTASY (1057) Create flowing graphic images with mouse or keyboard. (CGA). FLOWCHARTING (1078-1079) Complete system for flow-charts, organizational, electrical, etc., with symbols.

#### RELIGION

THE BIBLE (3301-3306) (6 disks) Old Testament, King James version.

THE BIBLE (3307-3308) (2 disks) New Testament, King James version.

WORD WORKER (3309-3310) (2 disks) Bible search program. New Testament, King James version.

BIBLEMEN (3330) Excellent Bible quiz program.

#### BASIC

PC-PROFESSOR (1401) BASIC tutorial. Good.

BASIC PROGRAM GENERA-TOR (1402) The menu driven way to write programs. **B-WINDOW (1407)** Give windowing capabilities to your Basic program.

#### UTILITIES

HOMEBASE (2608, 2612, 2613) Complete desktop organizer. Great!

**LIGHTNING PRESS (2718)** Printshop clone. Includes graphics for many uses.





PROFESSIONAL MASTERKEY (2805) Like Norton's. Retrieve deleted files. A lifesaver.

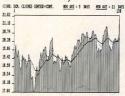
BAKER'S DOZEN (2821) 13 utilities from Buttonware.

AUTOMENU (3003) Make PC menu driven. Incl. passwords. SCREEN (3006) Save your monitor from screen burn-in.

DOT MATRIX FONTS (3061-3062) (2 disks) Print your text in different fonts. Works with most printers.

#### ACCOUNTING/FINANCE

MARKET CGA (BUS17) Performs sophisticated analysis on stocks, funds, etc. (EGA version is BUS16).



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BILLPOWER+ (BUS40) Bill clients for time and materials, advances, retainers, etc. Computes taxes, past due interest, etc. Has full G/L.

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FINANCE MANAGER II (774-775) (2 disks) For personal or small business financial management.

#### SPREADSHEETS

AS-EASY-AS (505) Great. Includes screen help menus. Willizes function keys. A Lotus clone that reads Lotus files. PC-CALC+ (512-514) (3 disks) Jim Button's famous Lotus clone. CIRCLE READER SERVICE 37

#### EDUCATION

AMY'S FIRST PRIMER (248) Children's learning game that teaches letters, numbers and keyboard.



AMY'S FIRST PRIMER

FUNNELS AND BUCKETS (201)
A fun way to learn math.
MATHPAK (202) Tutorial with
lessons in higher math.
PC-TOUCH (204) Learn typing.
BASIC TUTORIAL (208) Learn
programming with BASIC.
BEGINNING SPANISH (211)
Tutorial.

SPANISH II (232) Sequel.
BIBLEQ (214) Learn the Bible with this Q-A tutorial.
FACTS 50 (239) Geography lessons for U.S. Nice graphics.



#### APPLICATIONS

FORM LETTERS (1907) Commonly used form letters and business applications. EZ-FORMS (1908) Make forms to meet different needs. MANAGER'S PLANNER (1920) Doily planner. Prints out. HOME INVENTORY (1966) Track all your possessions. BIORHYTHM (1990) Display the 3 biological cycles: physical, emotional, intellectual. FAMILY HISTORY (2203-2204) (2 disks) Create files and genealogical reports. DR DATA LABEL (2327) Powerful mailing list program. Customize labels to size.

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#### SPREADSHEET TEMPLATES

LOTUS MACROS (601) Save hours of work. (Req. Lotus) LOTUS SPREADSHEET TEM-PLATES (602) Ready-made. (Requires Lotus 1-2-3)

GOAL-SEEKER V3.5 (624) Achieve objectives by changing spreadsheet variables and seeing result. (Requires Lotus.)

LOTUS TUTORIAL (630) Learn Lotus (requires Lotus).

#### DOS

DOS TUTORIAL (1301) Teaches you to use DOS.

STILL RIVER SHELL (1304) Run DOS commands from a menu. Makes DOS easy.

BATCH FILE TUTORIAL (1305) Utilize batch file processing.

Utilize batch file processing.
MORE DOS TIPS (1318, 1323)
(2 disks) More about DOS.
HELP DOS (1326) On line
DOS help with menus. Includes DOS dictionary of
terms and a hints menu.

TELECOMMUNICATIONS
Q-MODEM 3.1 (1101, 1102, 1144) (3 disks) Powerful but easy to use. Fast

RBBS V16.1A (1107-1109, 1150) (4 disks) Multi-user bulletin board system.

PROCOM 2.42 (1112-1113) (2 disks) Hacker's delight. Redial capability. Latest version.

#### SECURITY/HACKING

**COPY PROTECTION 1 (1219)** Instructions for unprotecting commercial software.

COPY PROTECTION II (1220) More software you can unpro-

COPY PROTECTION III (1221)
Additional software to unpro.
FLUSHOT (1225) Checks
software for viruses.

#### DATABASE PROGRAMS

PC-FILE + 2.0 (801, 805, 837) (3 disks) Rated better than dBase III+ by Consumer Rpts. PC-GRAPH (802) Create graphics from PC FILE. FILE EXPRESS 4.0 (803-804)

Powerful system. Allows 32,000 records. Sorts up to 10 key fields.

**DBASE III+ ROUTINES (851-852)** (2 disks) Latest utilities to help you utilize dBase III+.

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#### SOFTWARE

matically posted to the third element, the Phone List. If you want to make a telephone call from this list, you need only highlight the number with the selection cursor and press F3.

The project manager's three modules make up the heart of WWW, the "What" side. The first, Project View, provides for projects what People View offers for individuals—a simple list. With the tasks entered, the second module, Project Milestones, establishes checkpoints (start, end, and key points in between). The Time Charts facility displays or prints a Gantt chart (a graphic timeline overview of the project).

In addition to the when, who, and what aspects, WWW can print data stored anywhere in the program. You can create mailing labels and print phone lists, memos, charts, or just about anything else pertinent to the purposes of WWW.

WWW seems well designed. Under MS-DOS in a 16MHz hybrid XT/386 computer, it moved smartly. According to the manual, more RAM means faster operation. At least 640K of RAM is recommended, but it will work with less. The program supports the Lotus/Intel/Microsoft expanded memory as well as a math coprocessor. You can run this program on 1.2MB floppies, but not easily.



Who-What-When's Daily Calendar (one of several integrated modules) helps you organize any type of task.

Once you understand the notion of structured personal time management, WWW is easy to use. Indeed, your intuition can guide you. Prompts—both as messages and as 'autoforms'' (that is, program-controlled fields for data entry)—smooth the way. If something isn't clear, context-sensitive help screens can be called as needed. There's even a multi-screen tutorial to which you can hop at will. The key here, however, is to think of your time and that of your co-workers as part of a system, particularly when it comes to coordinated work on a project. With an overview of people, resources, and deadlines in mind, you'll find that WWW will prove a powerful assistant.

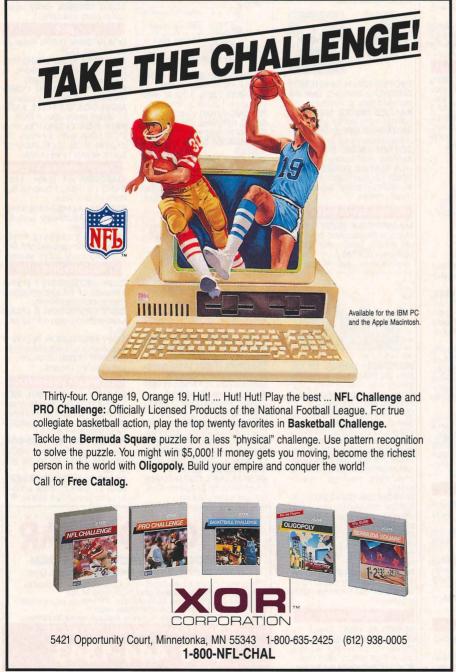
As you become comfortable with the program, you can expedite work by using "speed keys" to move directly from one subprogram to another without bothering with the menus. Attempts to do what WWW can't are met with beeps and explanatory notes; errors are well handled.

The large format (8.5 x 11 inches) manual offers enough detail in plain English and is sufficiently illustrated with screen snapshots to give you a good idea of what to do. And while there is an on-screen tutorial, the manual lacks one—a weakness in documentation, though not fatal. Missing, too, is a quick reference card. But separator cards for creating your own project notebook are included.

Calling Chronos as a person simply curious about the product, I quickly got though to a knowledgeable company official who clearly and patiently answered my detailed questions about the nature and operation of the program. Registered owners are given a technical support number.

Anyone who regularly uses a scheduling calendar should find WWW a boon companion. In projects involving several people, WWW can improve efficiency dramatically. It seems well suited to small businesses and to mid-level management in businesses of any size. It's rationally designed and adaptable to virtually any type of scheduled activity.

—HENRY F. BEECHHOLD





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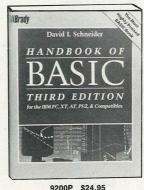
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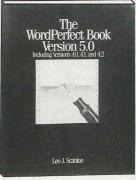
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#### BEST-SELLING SOFTWARE

These best seller lists, prepared exclusively for HOME-OFFICE COMPUTING by Egghead Discount Software, are based on actual sales at 151 Egghead stores around the United States for the month of October.



#### ı B M

#### BUSINESS

- 1. Lotus 1-2-3 v2.01 Lotus Development Corp. 2. WordPerfect v5.0 & v4.2
- WordPerfect Corp. 3. Windows/286 v2.10
- Microsoft Corp.
- 4. Sideways v3.2 Funk Software 5. Word v4.0
- Microsoft Corp. 6. Turbo C v2.0
- **Borland International** 7. Quattro **Borland International**
- 8. Crosstalk XVI Crosstalk Communications
- 9. Turbo Pascal v4.0 **Borland International**
- 10. First Publisher v2.0 Software Publishing Corp.

#### HOME/SMALL BUSINESS

- 1. Quicken v2.1 Intuit
- 2. The Print Shop Broderbund Software
- 3. Calendar Creator Plus Channelmark Corp.
- Managing Your Money v4.0 MECA
- Address Book Plus, Sr. Channelmark Corp. Micro Cookbook
- Pinpoint Publishing WillMaker v3.0
- Nolo Press 8. Print Magic
- Ерух First Publishing Art Gallery Software Publishing Corp.
- 10. Certificate Maker Springboard Software

#### **EDUCATION**

- Learning DOS v1.01 Microsoft Corp.
- Reader Rabbit The Learning Company
- Math Blaster Plus Davidson & Associates
- Where in the World ... Broderbund Software Where in the USA ...
- Broderbund Software Think Quick The Learning Company
- Typing Tutor IV Simon & Schuster
- 8. Barron's Study Program for the
  - Barron's Educational Series
- Math Rabbit The Learning Company
- 10. Magic Spells The Learning Company

#### **ENTERTAINMENT**

- 1. Flight Simulator v3.0 Microsoft Corp.
- 2. T.V. Game Shows ShareData
- 3. Hardball Accolade
- PT-109 Spectrum HoloByte
- 5. Test Drive Accolade
- 6. Grand Prix Circuit Accolade
- 7. Ultima V: Warriors of Destiny Origin Systems/Broderbund
- 8. Scrabble Leisure Genius/EA
- 9. Earl Weaver Baseball Electronic Arts
- 10. Paperboy Mindscape

### M C 1 T 0 S

#### **BUSINESS**

- 1. Word v3.01-v3.02 Microsoft Corp.
- 2. MacDraw II Claris Corp.
- 3. Excel v1.5 Microsoft Corp.
- 4. Tops v2.0 Tops, Inc.
- S.U.M. Symantec Corp.
- 6. PowerPoint v2.0 Microsoft Corp
- 7. Fully Powered Mac v1.0 Brady Utility Software
- 8. Cricket Graph v1.2 Cricket Software
- 9. PageMaker v3.0 Aldus Corp.
- 10. File Maker II Claris Corp.

#### HOME/SMALL BUSINESS

- 1. Quicken v1.0 Intuit
- The Print Shop Broderbund Software
- Managing Your Money
- WetPaint/Vol. 1 & 2 Dubl-Click Software
- World Class Fonts!/Vol. 1 & 2 Dubl-Click Software
- Mac Money v3.0 Survivor Software Ltd.
- Poster Maker Plus Broderbund Software
- Images v1.0 3G Graphics
- Dollars and Sense Monogram
- 10. Thunder Electronic Arts

#### **EDUCATION**

- 1. Mavis Beacon Teaches Typing The Software Toolworks/EA
- Where in the World Is Carmen Sandiego?
- Broderbund Software Type!
- Broderbund Software Reader Rabbit
- The Learning Company Math Blaster!
- Davidson & Associates HyperTutor
- Channelmark Corp.
- Manhole Mediagenic
- Kids Time Great Wave Software
- Typing Tutor IV Simon & Schuster
- 10. 101 Macros for Excel Individual Software

#### **ENTERTAINMENT**

- 1. Colony Mindscape
- Falcon v2.0 Spectrum HoloByte
- Flight Simulator v1.02
- Microsoft Corp. Shufflepuck Cafe
- Broderbund Software The Toy Shop
- Broderbund Software
- 6. Dark Castle Silicon Beach Software
- MacGolf Practical Computer Application Inc.
- Chuck Yeager's AFT Electronic Arts
- Beyond Dark Castle Silicon Beach Software
- 10. Leisure Suit Larry In the Land of the Lounge Lizards Sierra On-Line

# A P

#### **BUSINESS**

- 1. Copy II Plus Central Point Software
- 2. AppleWorks v2.0 Claris Corp.
- WordPerfect v1.1 & v2.0 WordPerfect Corp. Timeout: Quickspell
- Beagle Brothers 5. Publish-It!
- Timeworks List & Mail Avery
- 7. Timeout: Super Fonts Beagle Brothers
- 8. PFS: Write Software Publishing Corp. Sideways v2.0
- Funk Software 10. Super Print Scholastic

#### HOME/SMALL BUSINESS

- 1. The Print Shop Broderbund Software
- 2. Bank Street Writer Plus Broderbund Software
- The Print Shop Graphics Library Party Edition Broderbund Software
- 4. Multiscribe v3.0 StyleWare
- 5. Quicken Intuit
- The Print Shop Sampler Graphics Broderbund Software

The Print Shop Holiday Graphics

- The Print Shop Companion Broderbund Software
- Broderbund Software The Print Shop Party Graphics Broderbund Software
- 10. Print Magic Epyx

#### **EDUCATION**

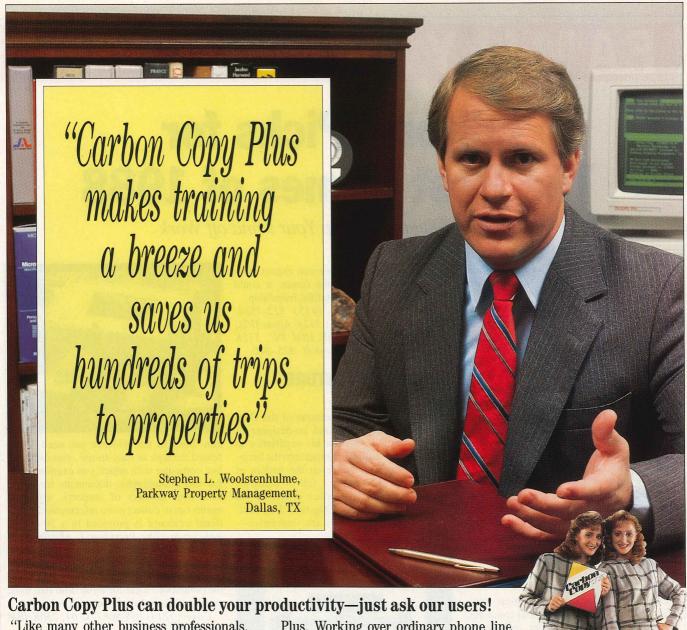
- 1. Mavis Beacon Teaches Typing The Software Toolworks/EA
- 2. Think Ouick
- The Learning Company 3. Where in the World Is Carmen Sandiego?
- Broderbund Software 4. Math Blaster Plus Davidson & Associates
- 5. Reader Rabbit The Learning Company
- Where in the USA Is Carmen Sandiego? Broderbund Software
- 7. Mixed-Up Mother Goose Sierra On-Line
- The Oregon Trail MECC Magic Spells
- The Learning Company 10. Sesame Street Letters For You Polarware Software

#### **ENTERTAINMENT**

- 1. Wings of Fury Broderbund Software
- The Toy Shop Broderbund Software Hardball
- Accolade California Games
- Epyx 5. Test Drive Accolade
- Skate or Die Electronic Arts
- Paperboy Mindscape

8. Marble Madness

- Electronic Arts Ultima V: Warriors of Destiny Origin Systems/Broderbund
- 10. Monte Carlo PBI Software



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# Editors' Picks for The Best Games of 1988

14 Games That Will Keep Your Mind off Work

t was a dynamic year for the entertainment software industry. New standards were set for complexity in adventure games, for sophistication and realism in simulations, and for originality in all genres. Companies improved upon past successes and fed our insatiable appetite for bigger and better games (note that half of the games featured below are either sequels, continuations, or updated editions). New, smaller companies made their debuts as worthy competition against the more established software houses. And in 1988 the entertainment software industry crossed the Iron Curtain to bring us a simple, original, and addictive game from the Soviet Union.

We've gone through all the games we reviewed in the past year to find the best. And we are pleased to present the Editors' Picks for the best games of 1988 . . . (drumroll) . . . The envelope, please . . . .

#### **GAME OF THE YEAR**

#### **Tetris**

Our choice for Game of the Year introduced "glasnost" to the personal computer. Tetris, the first entertainment software to reach the West from the Soviet Union, has a simple objective: You must prevent a steady stream of falling shapes from piling up to the top of the screen before you can fit them precisely into rows. When you complete a row, it disappears. But beware; as simple as the game is to learn, it is impossible to master. The result is the most frustrating and addictive game we've come across. If this is



any indication of what we can expect from Soviet programmers in the future, it could be the beginning of a beautiful friendship.

Spectrum HoloByte, (415) 522-3584. 512K Amiga, 48K Apple, 512K Apple IIGS, 512K Atari, C 64, 256K IBM PC, 512K Macintosh, 1MB Macintosh II. \$25-\$40.

#### **GRAPHIC ADVENTURE**

#### **Police Quest**

Jim Walls, a 15-year veteran of the California Highway Patrol and co-designer of *Police Quest*, drew from his experience to give gamers a realistic glimpse into the brainwork, excitement, and even the tedium of police work. The game is full of scenarios that test your skill as a police officer as you build your case against a big-time drug dealer. The game's graphics are impressive—



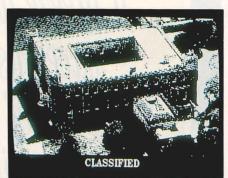
complete with a main character that struts around like George Kennedy on *The Blue Knight*—and the play system does an excellent job of combining joystick and keyboard controls to create natural movement between graphics and text.

Sierra On-Line, (209) 683-4468. 512K Apple IIGS, 512K Atari ST, 256K IBM PC. \$50.

#### **ORIGINAL FORMAT**

#### The President is Missing v2.2

Booting up *The President Is Missing* is like stepping into a spy novel. The President has been kidnapped along with the leaders of several other countries. Your job is to find



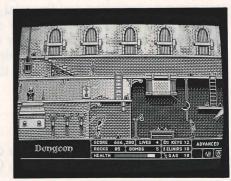
him. Most of the evidence you need is presented through an easy-to-use, simulated on-line computer with which you examine written and photographic documents for clues, look over dossiers of suspects, and send agents out to collect more information. Additional evidence is provided in a 30-minute audio tape. *The President Is Missing* is a fresh new approach to detective games in that there are no preset scenarios to be acted out. You progress in your ability to combine clues into solutions. Ideal for those who like to be swept up in a good mystery.

Cosmi, (213) 835-9687. C 64, 256K IBM PC. \$25-\$30.

#### ARCADE

#### **Beyond Dark Castle**

For those of us who loved *Dark Castle* but were disappointed with the ending (or lack thereof), Silicon Beach has expanded and improved upon the original to bring us *Beyond Dark Castle*. The story picks up as you,



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The ultimate prospect/client/customer tracking system. Hard drive req. Great. ☐ BUSINESS LETTERS (303 & 304) - (2 disk set) 650 business letters to fit all your needs. Edit w/ any word processor. LEGAL LETTERS (611) - 100 legal letters. Edit w/ any word processor.

MR. BILL V3.27 (311 & 312) - (2 disk set) Time & billing package; costs, credits, reports, audit trail, etc.

PC-PAYROLL V2.45 (464) - Menu driven payroll system; 100 employees or less ☐ LANDLORD V2.03 (585) - Fast & friendly rental property mgmt.

DEMPLOYEE MGMT SYSTEM (688) . Determines requirements for jobs, tests employees/applicants, & prints report. SOAR V1.92 (449 & 450) - (2 disk set) Accounts receivable program. Handles a variety of services or products.

BILLPOWER V3.9 (601) - A timekeep ing, billing & bookkeeping program for small firms. Req. 450K & hard drive. PRO PC-ACCT SYSTEM (526) - Fully

integrated G/L, A/P, A/R system. Menu driven, on-screen help, cross posting, unlimited accounts, & much more. Req 380K.



#### COMMUNICATIONS

☐ QMODEM V3.1 (293 & 294) - (2 disk set) Full featured modem program. 200

number dialing directory, etc.

¬ PROCOMM PLUS TEST DRIVE (504) Everything you could possibly want in a communications package. Req modem. PC-DIAL V2.0 (466) - Modem program by Jim Button. Smartkeys & more.



#### **DATABASE**

☐ FILE EXPRESS V4.22 (33 & 34) - (2 disk set) Menu driven. easy to use database for begin ners to experienced.

☐ PC-FILE + V2.0 (493 - 495)- (3 disk set) Full-featured database; help screens, menus, macros. One of the best, J Button



#### **EDUCATION**

COMPOSER (3) - Create, save, edit, play, & print your music. LETTERFALL V1.1 (119) - Im-

your touch typing skills; 16 levels. ALGEBRA TUTOR (577) - By Professor Weissman, teaches operations. CGA reg. BEGINNING SPANISH (121) - Teaches vocabulary, phrases, etc. Basic required.

THE WORLD 3D (127) - Display maps of the world. CGA required.

☐ FUNNELS & BUCKETS V2.0 (130) -Great learning game; add, subtract, multi-

ply, & divide. Ages 5 - 10.

MATH-WHIZ [188] - Teaches various math operations. Ages 5 and up. You choose the level. Basic required.

AMY'S FIRST PRIMER (133)- Alphabet. numbers, counting, shapes, matching, etc. Ages 4 - 8. CGA & Basic req.

GRADE GUIDE V2.5 (118) - Store. re trieve & analyze students' grades.

□ PC-QUIZZER V2.1 (308) - A testing

and training package. Requires 384K.

ANIMAL MATH/MOSAIC (181) - Count objects & graphic learning tool. Ages 4 & up . CGA required.



#### GAMES

☐ SLEUTH V4.1 (89) - Murder mystery game similar to the board game 'CLUE'

□ BLACKJACK (95) - Advanced blackjack game with tutor, multiple players. Best one yet. CGA or Hercules.

MONOPOLY V6.7 (106) - Just like the board game, 2 to 4 players. CGA req.

CUNNING FOOTBALL (693) -A dynamic game with excellent graphics. EGA req. ☐ LAS VEGAS (116) - Craps, Roullete. Poker, & more. CGA req., Basic on some. □ 3D CHESS V1.01 (215) - Excellent chess game. Switch between 2D & 3D. SAM SPADE V1.0A (226) - Great detective game, Mazegame; creates mazes SUPER PINBALL (212) - 5 different games. CGA required

□ WORDPLAY (367) - Wheel of Fortune clone. You provide the prizes, CGA req. ☐ ADVENTURE GAME TOOLKIT (595 & 596) - (2 disk set) Create & play your own text adventure games. 2 levels.

PC-Pro GOLF (667 & 668) - (2 disk set) A graphic based golf game. CGA req.



#### **GRAPHICS**

FINGERPAINT V2.0 (282) -Paint program; 6 fonts, 81 siz-

es . Use for desktop publishing, slideshow & cartoon playing. CGA, EGA, or PRINTMASTER GRAPHICS (319)

Over 200 graphics. Printmaster req Order Disk #320 for Printshop versio ☐ PRINTMASTER GRAPHICS / 2 (549) Contains 169 graphics relating to men. women & people. Printmaster req. Order Disk #589 for Printshop version

☐ PRINTMASTER GRAPHICS / 3 (550) Contains 165 graphics relating to animals & transportation. Printmaster req. Order Disk #590 for Printshop version PRINTMASTER GRAPHICS / 4 (701) -Contains 86 graphics relating to computers, music & medical. Printmaster req. Order Disk #702 for Printshop version PC-KEY-DRAW (534-536) - (3 disk

set) - Combination CAD & paint program for power & flexibility. Does drawing, paint, text (multiple fonts), animation, etc.

DANCAD 3D V2.0E (424 & 425) - (2 disk set) Advanced 2D/3D drafting program. Stereoscopic 3D wire frame animation. EGA, CGA, Hercules. 640k req. CITY DESK V7.01 (197) - Desktop

publisher with graphics capability.

□ FLODRAW V1.00 (542 & 543) - (2 disk set) Produces flowcharts, organizational charts, system diagrams, etc. CGA required.



#### LANGUAGE

☐ TURBO "C" TUTOR (489 & 490) - (2 disk set) 14 lesson tutorial; learn to program in 'C'

"C" LANGUAGE V2.1 (299 & 300) - (2 disk set) Complete programming environment. Source, compiler, samples.



#### NOVELTY

STRESS & SHRINK (74) -Stress - stress test. Shrink -

personality analysis. ☐ HORSERACING (343) - Handicapping

for thoroughbreds. ASTROLOGY V9.5 (284) - Read your own chart from stars, moon, etc. ☐ RECIPES V1.0 (445) - Over 125 recipes, adjust serving sizes from 1-99. □ EDNA'S COOKBOOK V1.16 (566) -Record, file, list & print recipes. 2 drives WEIGHT CONTROL (588) - Programs

designed to get rid of unwanted inches.



#### **PRINTER UTILITIES**

☐ LQ V2.26 (509) - Produces high quality text on dot matrix printers. Multiple fonts with

print spool - LASERJET FONTS/I (327) - 30 + downloadable fonts for Laserjet Plus/II. ☐ LASERJET FONTS / II (471 & 472) - (2 disk set) More downloadable fonts for HP Laserlet Plus/II. Helvetica, Script, etc. SPOOLERS (48) - Contains 4 different print spoolers. A must for computerists ON-SIDE (560) - Sideways printing program. Req. IBM or Epson printer.



#### **SPREADSHEET**

PC CALC + V 1.0 (537-539) -(3 disk set) - Complete program, Buttonware.

□ LOTUS PROGRAMS (28 - 32) - (5 disk set) Contains as many applications and utilities that we could find. Requires Lotus ☐ AS EASY AS V3.0 (302) - Lotus clone. 52 column sheet, graphing, supports functions of 123, "WKS" files, etc.

□ LOTUS LEARNING SYSTEM (458) - A tutorial that covers overview, applications, etc. Lotus NOT required for tutor.



#### UTILITIES

DISK COMMANDO V2.0 (218 & 219) - (2 disk set) Norton Advanced Utilities clone. Many features.

SIM-CGA (220) - Great for most pro grams that need color (CGA) to run. ☐ HOMEBASE V2.5 (528-530) - (3 disk set) Great desktop organizer, linear database, editor/word processor, calendar appt. book, cut/paste operations, etc.

DOS HELP (255) - Help screen for DOS commands, functions & batch files at your fingertips. For DOS 3.XX.

DOS TUTORIAL V4.4 (256) - Menu driven, learn to use your computer. ☐ LIST V6.2A (274) - Best utility for view-

ing documentation or any ASCII file. AUTOMENU V4.01 (280) - Access pro-

grams, batch files, commands, etc. ALT V1.05 (581 & 582) - (2 disk set) Puts the power of Sidekick, Superkey & Norton Utilities, rolled into one at your fingertips. Hard drive required.

□ VACCINE [541) - Various programs to fight against the "VIRUS" & "TROJAN HORSE' programs. A MUST FOR ALL. BEST UTILITIES (540) - Over 40 of the best utilities we could find



#### **WORD PROCESSING**

□ SIDEWRITER (6) "Sideways" printing; great for

CATALIST V3.2 (163 & 164) - (2 disk set) One of the most powerful mailing lists on the market. Excellent.

☐ PC-WRITE V3.0 (9 & 10) - (2 disk set) Full featured word processor, all the features of the expensive one's. LETTERHEAD (69) - Create and print

your own letterhead on letters and envelopes. IBM/Epson comp. printer req.

GALAXY V2.3 [11] - Easy to use word processor; menus & quick keyboard com-

mands. Lots of features. O WORDPERFECT MACROS (189) Over 80 macros for Wordperfect V5.0.



#### WHAT'S NEW?

□ COMPASS (694) - Interactive, menu-driven accounting, word processor, database, spreadsheet, calendar, on-line

help screens & more. MASS APPEAL (630) - Superb mailing list manager. Requires hard drive.

□ SELECT-A-COLLEGE 88-89 (636) -What to look for in a college, plus describes colleges and helps in the application process

PERSONAL POET (718) - Create custom poems from a variety of choices. □ HOME BARTENDER GUIDE (708 & 709) - (2 disk set) Recipes for 149 different drinks

GRASP V1.10C (689 & 690) - (2 disk set) A simple graphics programming psuedo-languange.

THE NUTRITIONIST (670 & 671) - (2 disk set) Rapidly and comfortably evaluate foods for the proper nutriotional con-

FORTUNE TELLER V1.0 (675) - Contains various programs for foretelling the future. Loads of fun.

BGA TREK V1.0 (677) - Fight the Klingons and Romulans. Go where no man has gone before. Great graphics. EGA required.

INSTACALC V2.50 (697) - A fullvered, memory resident spreadsheet.



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Prince Duncan, are escaping from the dungeon where the Black Knight's gargoyle had imprisoned you. Very little has changed from the original. The game's play system and the graphics are still excellent. The sound, however, is probably the best feature of the game. Every noise, from footstep to thunderclap, is digitized and adds to your enjoyment. Among the features not in the original are a map of the castle layout, an option to practice any level, and a much-needed savegame option. These improvements, plus a few new monsters, make Beyond Dark Castle a must for arcade fans.

Silicon Beach Software, (619) 695-6956. 512Ke Macintosh. \$50.

#### **TEXT ADVENTURE**

#### **Beyond Zork**

Beyond Zork goes far beyond the ordinary text adventure, with the inclusion of role playing, humor, and many unique options. Each player creates a character by distributing a set number of "points" among six characteristics. Your quest is to find the fabled Coconut of Quendor. On your journey, you'll encounter detailed text descriptions and thought-provoking puzzles. However, you will also have to battle monsters, garner



treasure, and gain experience, as you would in a role-playing game. There's a new UNDO command that negates the last command you entered, as if you never typed it. The game also includes a new automatic map-generating feature. *Beyond Zork*: Let there be more.

Infocom, (617) 492-6000. 512K Amiga, 128K Apple, C 64, 192K IBM PC, 512K Macintosh. \$45-\$50.

#### **SIMULATION**

#### Microsoft Flight Simulator v3.0

Of all the flight simulations that came onto the market in 1988, few came close to the level of realism and detail that Microsoft achieved with its original *Flight Simulator*. Now, Version 3.0, the first major update of the program in four years, improves upon its predecessor with a host of new features, including pull-down menus, a multiple-window option, more planes to choose from, and



an expanded entertainment section. There is a built-in flight school that demonstrates everything from taking off to performing loops and spins. And *Flight Simulator* 3.0 is not copy protected, so you can install it on your hard drive, speeding up scenery changes and response from the pull-down menus. With the standards that version 3.0 has set, future simulations will have to aim high.

Microsoft Corp., (206) 882-8080. 384K IBM PC. \$50.

#### POLITICAL/FINANCIAL

#### Balance of Power: The 1990 Edition

The basic premise of the game is still the same: Players assume the role of either the President of the United States or the General Secretary of the Soviet Union as they design their nation's foreign policy. However, *The 1990 Edition* features a new "multipolar" level, at which minor (non-superpower) countries pursue their own foreign policies and influence world events. This level forces players to keep track of not only their opponent's actions, but also those of their allies, because a minor skirmish could easily erupt into a superpower conflict. *The 1990 Edition* also includes 18 more countries, a "crisis advisory" feature, and menu options to track



all of the new information. If you were at all impressed with the original *Balance of Power*, then hold onto your hat—because you ain't seen nothin' yet.

Mindscape, (312) 480-7667. 512Ke Macintosh. \$50.

#### **SPORTS**

#### **California Games**

Grab your shades and wax your surf-boards. This installment in the sporting games series from Epyx marks a shift from the traditional Olympic events into more sundrenched sports. Skateboarding, surfing, BMX bike racing, and Frisbee are among the events you have to choose from in this original arcade game. Still present is the combination of a simple play system and a lot of room for hot-dogging that made the previous games in the series such favorites. But now



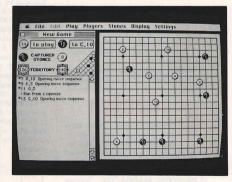
the events are more innovative, and the sound-track includes "Louie, Louie."

Epyx, Inc., (415) 366-0606. 512K Amiga, 64K Apple, 512K Apple IIGS, C 64, 128K IBM PC. \$40.

#### **BOARD-GAME ADAPTATION**

Go

Go is a two-player strategy game invented in China some 4,000 years ago. The basic idea revolves around trying to control the most territory on a board by surrounding



your opponent's playing pieces, called "stones," with your own. Go for the Macintosh is a well-thought-out adaptation of this classic game. Playing against the computer, another person, or even via modem, you have a variety of options available to shape the game to your level of play. You can learn from your mistakes by saving annotated games, then playing them over from different points, using various strategies. The designer of the game made Go versatile, easy to learn,

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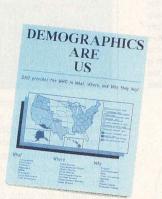
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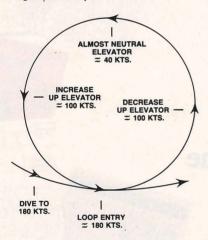
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CIRCLE READER SERVICE 60



Better Loops with Flight Simulator - While the "Flight Physics" manual description is adequate for most, we get enough calls from frustrated computer pilots unable to perform a loop to warrant the following additional instructions. For those already successful at looping the aircraft, these instructions should help make your loops rounder and more satisfying.

After diving to the suggested looping airspeed (180 knots will do), add as much up elevator as possible without stalling the aircraft. As you pitch up and airspeed slows you will have to reduce some of this elevator pressure. Many people leave the elevator setting on high and become frustrated when the aircraft stalls before pointing straight up. In a perfectly round loop your elevator should be almost all the way back to neutral by the time you're upside down. Since airspeed is very slow at the top of the loop (and the portion of the circle traveled is small), your pitch attitude change should be gracefully slow as well. Start adding up elevator pressure again as airspeed increases. By the time you get to the bottom of the loop, the up elevator setting should be where it was when you began the maneuver and your airspeed should be adequate to begin another loop.



In summary, up elevator setting varies throughout the loop. The faster your airspeed, the greater the up elevator pressure. Flight Simulator is the only simulation on the market that accurately portrays the flight characteristics of a light aircraft when performing this maneuver. In reality there's little room for error in the amount of up elevator you can use, and meeting the challenge of performing a perfectly round loop can be a very satisfying experience. You may even find yourself more knowledgable about loops than many non-aerobatic pilots who fly real airplanes. Happy trails!

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CIRCLE READER SERVICE 54

#### FAMILY COMPUTING

and one of the best board-game adaptations we have ever seen. May you enjoy it as much as others who have played for centuries.

Infinity Software, (415) 420-1551. 512Ke Macintosh. \$50.

#### **ROLE-PLAYING ADVENTURE**

#### The Bard's Tale III: Thief of Fate

The 1988 role-playing adventure of the year achieves a compelling balance of features that makes game play accessible to both first-time dungeon delvers and more experi-



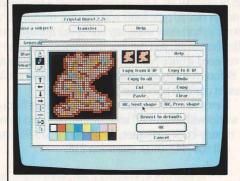
enced knights of the realm. Starting from the introductory screens, you are drawn into a scintillating and constantly unfolding plot. Every character has his or her own story to tell. You'll come to know the daring deeds of the hero Hawkslayer and encounter the carnage wrought by the wizard Cyanis. To aid your quest, the game comes with automatic mapping (and with seven dimensions and 84 dungeon levels to conquer, you'll need all the help you can get). Rich graphics, superb puzzles, a smooth interface, and hordes of bloodthirsty creatures all combine to make *The Bard's Tale III* an unparalleled computer role-playing experience.

Electronic Arts, (415) 571-7171. 64K Apple, C 64. \$50.

#### **CONSTRUCTION KIT**

#### **Crystal Quest with CritterEditor**

CritterEditor makes an already great arcade game even better by letting you edit almost every aspect of Crystal Quest. With CritterEditor you can alter the speed, image,



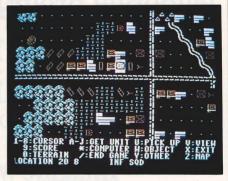
aggressiveness, and point value of each of the 12 different types of "nasties" that you face in the game. Besides changing the critters, you can create your own bonus system as well as define the number of crystals that you must collect on each level and the number of randomly placed mines that always seem to get in your way. In total, the editor lets the user make more than 1,000 changes in the game's colors, shapes, sounds, and critter behavior.

Casady and Greene Inc., (408) 624-8716. 1MB Macintosh. \$80 for both.

#### **STRATEGY & TACTICS**

#### **Panzer Strike!**

Feel the fury of the German blitzkrieg with *Panzer Strike!* Numerous scenarios involving various-sized units cover three theaters: the entire Eastern front; Western front campaigns that do not involve American troops; and the North African campaign. You can choose to simulate a single battle or an entire campaign, both of which involve practically every weapon used in those theaters—from



tanks to mortars to mine fields. There is an excellent construction-set option that lets you depart from the historical setups provided by the game and fight the battle your way. In addition, *Panzer Strike!* boasts a superb play system.

Strategic Simulations, (415) 964-1353. 64K Apple, C 64. \$45-\$50.

#### **EDUCATIONAL GAME**

### Where in Europe Is Carmen Sandiego?

The third product in this long-running, best-selling series of educational games pits you, the eager A.C.M.E. detective, against Carmen Sandiego and her associates at V.I.L.E.—the Villains International League of Evil. Catching them tests your knowledge of geography and assorted cultural facts. The new *Carmen* is not much different from the first two (Where in the World and Where in the USA). There are 34 new cities, which means there's new content to master. This may be the principal benefit of the most recent *Carmen*. There are also a new data-



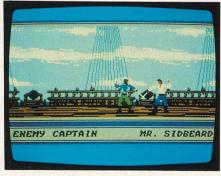
base feature, more ways to investigate (no longer just locations, now you can interview witnesses), and another reference book, a specially prepared atlas from Rand McNally. Where In Europe still uses the same personable writing and graphics style and the easy-to-use play system found in the previous Carmens. And, most important, there is still a balanced blend of learning and playing.

Broderbund Software, (800) 527-6263. 128K Apple, C 64, 256K IBM PC. \$40-\$45.

#### **HYBRID**

#### Pirates!

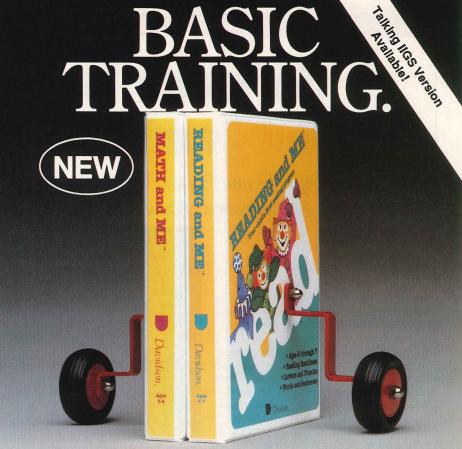
Put on your eye patch, get that parrot on your shoulder, and head for the high seas. *Pirates!* combines a role-playing adventure with the military, political, financial, arcade, strategy, and simulation genres to create one complex, but highly playable, game—destined to become a classic. You play the part of a merchant trader, pirate, buccaneer, or pirate hunter from one of six periods from 1560 to 1700. Starting with one small ship and a minuscule crew, you plunge into the



wonderful world of sixteenth- or seventeenth-century commerce; or use the sea lanes to war and raid on the ships of other countries. There are battles at sea and on land, treasures to hunt, booty to take, and honors to achieve. The game is played with joystick controls; it's fast paced and, with four levels of play, it's always a challenge. *Pirates!* will appeal to anyone who likes involving games.

MicroProse Software, (301) 771-1151. 128K Apple, C 64, 256K IBM PC. \$45.

—COMPILED BY STEVE WILLIAMS



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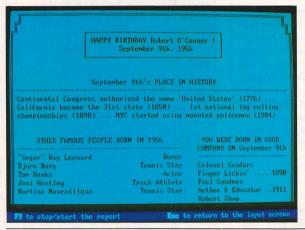
# Software for Learning and Leisure

Comprehensive and Capsule Reviews of New and Noteworthy Programs for Education, Family Productivity, and Entertainment

The following ratings key and table refer to full as well as capsule software reviews. Listed are various types of computers, as designated under "System Requirements," and the models included under each designation. When a review lists additional hardware. software, or memory, it is required unless noted as "recommended" or "optional." When a review lists more than one computer, the machine marked with an asterisk (\*) is the one on which the software was reviewed. Requirements are *not* listed where obvious (for instance, printers with graphics programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher.

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very good; ★★★ Excellent; N/A Not Applicable.

Designation	Models
512K Amiga	500, 1000, 2000
48K Apple	II/II Plus/IIe/IIc/IIGS (in IIe/c mode)
64K Apple	II Plus/IIe/IIc/IIGS (in IIe/c mode)
128K Apple	IIe/IIc/IIGS (in IIe/c mode)
128Ke Apple	IIe (enhanced ROM)/IIc/IIGS (in IIe/c mode)
Apple IIGS	IIGS only
48K Atari	800/600XL/800XL/65XE/130XE
512K Atari ST	520ST/1040ST/Mega ST
C 64	C 64, C128 (in C 64 mode)
IBM PC	PC/XT/AT, PS/2, and compatibles)
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II



Find out historical facts from specific dates that match your own Special Days.

# Education/Family Productivity

#### **Special Days**

SYSTEM REQUIREMENTS: 256K IBM PC; printer recommended; 5.25- and 3.5-inch disks

PUBLISHER: The Salinon Corp., 7424 Greenville Ave., Suite 115, Dallas, TX 75231: (214) 692-9091

, ( ) - >
PRICE: \$40
PUBLISHER'S SUGGESTED AGES: 8-adult
COPY PROTECTED: No
OVERALL PERFORMANCE: ****
DOCUMENTATION: ****
ERROR-HANDLING: ****
GRAPHICS QUALITY: N/A
EASE OF USE: ****

As your birthday rolls around, do you ever wonder about famous events that occurred on the exact day or in the year you were born? Would you like to know which songs were popular the year your parents were married? Did you ever feel that commercial greeting cards were too impersonal, not really reflecting your thoughts and feelings? Do you long for something unique? Wish no more, *Special Days* from the Life and Times series by Salinon is here.

Special Days is a database with preset reporting options comprising over 10,000

facts and bits of trivia about the years 1850 through the present. It features such information as popular songs, famous people born in your special year or on your birthday, sample grocery prices for those times, special events, and news events. It has a simple user interface with file-folder icons and help at the press of a key. There are three types of reports—birthday, anniversary, or flashback.

I immediately did birthday reports for each of my children, my husband, and myself. I learned that Stephen Crane shares my birthday, five pounds of flour cost \$.26 when I was born, and "Chattanooga Choo Choo" received the first gold record ever awarded.

Next, I did a report for friends who were celebrating their 20th anniversary. I printed the final report on parchment and placed it in a simple wooden frame. Nostalgia coupled with personalization ruled, and the results were impressive.

An excellent user's guide gives step-bystep instructions on program installation and use. For those who don't need the basics explained, there is a short section to get anyone up and running. The manual also provides a trouble-shooting section, suggestions for use, and the names and addresses of companies that supply parchment.

Uses for Special Days far exceed the suggestions in the manual. I used the database to find facts of interest for each day of the month, and added them to a calendar that I had created with another program. Hung in my kitchen, it attracts attention from all who

see it. Since the program automatically saves each document as an ASCII file, I could easily load a file into my word processor for enhancements. Taking this a step further, I created a mock newspaper with both *First Publisher* (Software Publishing Corp.) and *PageMaker* (Aldus). Reports can even be sent through telecommunication lines. My children have enjoyed making birthday reports for their friends, taking full credit for their ingenuity. No matter how you use it, *Special Days* is certain to please.

—JUDITH ZORNBERG

#### **Poetry Palette**

SYSTEM REQUIREMENTS: 128K Apple; 5.25-inch disks

PUBLISHER: MindPlay, 100 Conifer Hill Dr., Bldg. 3A, Danvers, MA 01923; (800) 221-7911

PRICE: \$60

PUBLISHER'S SUGGESTED AGES: 6-adult

COPY PROTECTED: Yes

OVERALL PERFORMANCE: \*\*\*

DOCUMENTATION: \*\*\*

ERROR-HANDLING: \*\*\*

GRAPHICS QUALITY: \*\*

EASE OF USE: \*\*\*

Roses are red or white or blue; with *Poetry Palette*, it's all up to you.

Even if you've never written a poem before, creating verse is easy with MindPlay's new *Poetry Palette*. Anyone from age six to adult will enjoy playing with words, ideas, and illustrations in the 13 suggested poetic forms. If you exhaust these 13, you can add your own.

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#### FAMILY COMPUTING

finding the right words; then type the words and illustrate with pictures of people, places, and things. If you need help, explanations and examples of each poetry type are a keypress away. You can also generate ideas with the Notes option or answer questions as a pre-writing exercise.

It's fun to begin a poem with the rhyming dictionary. I chose the air-hair sound, and the dictionary displayed dozens of words that rhyme with the selection. I could snare my share of words here and there (like millionaire, solitaire, or even software). I created my bit of doggerel on screen, pausing to pick cute graphics to illustrate the verse. There is a special space at the top of each page reserved for pictures.

One problem is that you must enter the title before you write. A title should really be an outgrowth of the poem so that the words and ideas can take the writer anywhere. Choosing a title first is inhibiting; it makes you want to stick to the topic. However, editing the words, ideas, and pictures is a simple matter. You can make as many changes as you want until your little ditty is ready to display.

The only real drawback is this final step. While the program inspires and promotes creativity, the printouts are a bit stiff. I wanted a special format for my poem, but all I could get was a printout of the screen.

With Poetry Palette, anyone can develop a flair and end up with fanfare. All ages can delight in the creative process; so beware.

—GWEN SOLOMON

#### **ENTERTAINMENT**

#### Sentinel Worlds I: Future Magic

SYSTEM REQUIREMENTS: 256K IBM PC: CGA, EGA, VGA, or Hercules; 5.25- or 3.5-inch disks

PUBLISHER: Electronic Arts, 1820 Gateway Dr., San Mateo, CA 94404; (800) 245-4525

**PRICE: \$50** 

COPY PROTECTED: No

OVERALL PERFORMANCE: \*\*\*

DOCUMENTATION: \*\*

PLAY SYSTEM: \*\*\*

GRAPHICS QUALITY: \*\*\*\*

EASE OF USE: \*\*\*

I looked at the box presented to me: Sentinel Worlds I: Future Magic—A Science-Fiction Role-Playing Mystery. The cover art showed spaceships bristling with far-out weaponry. Right off I felt that there were just too many hooks trying to draw me in. It seems every new game these days is called "Big Epic X." I wasn't going to be fooled so easily.

The game is off to a quick start because once you select your crew—surprise! You're under attack! I learned ship-to-ship combat in the space of a rapid heartbeat, emerged victorious, and took a moment to get a grip. I was in deep space with no idea of my whereabouts. Consulting a built-in star map, I plotted a course and warped over to one of the three detailed planets in the game. And there began my quest. . . .

Who were these strange raiders destroying supply shipments? Well, the answer was not an easy one to piece together, but it was worth the wait. While Future Magic suffers a bit from the same mid-game tedium that Star Flight does, I was truly impressed by the variety of interactions the game offers. For example, pilot your ship through the solar system and engage in real-time battles, then dock at a spaceport, refuel, and pick up a scientific mission. Next, land on a planet and drive around in your All-Terrain-Vehicle. What's this? A cave entrance? Everybody out! Got your Hyper-Uzi loaded? Good, you'll need it, because as you manipulate your characters using EA's unique, headsup-display interface, you'll find that you have to blow away nine out of every ten beings you meet. Not that this isn't an enjoyable task if you're wearing combat armor and wielding a neutron gun—it just wears thin.



Sentinel Worlds I has some of the best graphics we've seen on an IBM game.

Characters rise in level as they acquire experience, gaining more important skills along the way. Weapons and armor can be found in armories or purchased in various shops. Abilities can be increased at spas and libraries, and other more esoteric powers can be gained if you rub shoulders with the right people.

The scope of the plot is broad, the interface is good, and the system works as a game, but when all is said and done, what I really liked was the Easter egg. Easter eggs are a little extra something that programmers throw into their creations that really don't have anything to do with the game, but add to your playing enjoyment (if you can find them). In this case, a little searching near the submarine bay in the Ice Tiger caves will present you with the entrance to the EA offices. Here you will engage in the "Nerfwars.' —JEFF DONAHUE



### **CAPSULE REVIEWS**

TITLE/PUBLISHER		SYSTEM		RA	TIN	GS		
PRICE	SUMMARY	REQUIREMENTS	CP	0			GQ	EU
Mixed-Up Mother Goose Sierra On-Line Inc. P.O. Box 485 Coarsegold, CA 93614 (209) 683-6858 \$30	Four- to 9-year-olds help Mother Goose find the missing objects in familiar nursery rhymes. Once Little Bo Peep finds her sheep or Jack and Jill find their pail, the characters perform their rhymes with colorful animation and musical accompaniment.  —Judith Zornberg	512K Apple IIGS*, 256K IBM PC. CGA or Hercules. 5.25- and 3.5-inch disks (IBM).	N	* * *	* *	* * *	* * *	* *
See the U.S.A. Compu-Teach 78 Olive St. New Haven, CT 06511 (203) 777-7738	Though billed as a series of games about the U.S. for the whole family, the attractive graphics can't disguise the fact that the games get boring and there's little incentive to play in a group. Two nice touches: a giant full-color fold-out map of the country and the ability to construct your own quizzes. For ages 8 to adult, the keyboard interface may confuse youngsters—it sure stumped me. —Robert Gehorsam	64K Apple* with two drives. 256K IBM PC. Color monitor recommended. 5.25- and 3.5-inch disks.	N	*	* *	* *	* * *	*
Math Masters: Multiplication & Division DLM One DLM Park Allen, TX 75002 (214) 248-6300 \$46	A fast-paced customizable drill and practice to help children ages 9–14 improve multiplication and division skills. Ability to select speed, type of display, and feedback (happy and sad faces, the correct answer, an explanation, or all three) make this one of the most flexible math drills around.  —Gwen Solomon	64K Apple. 5.25-and 3.5-inch disks.	Y	* * *	* * *	* *	* *	* * * *
Vocabulary Challenge Mindscape Inc. 3444 Dundee Rd. Northbrook, IL 60062 (800) 221-9884 \$50	For students, ages 7-adult, who need work on vocabulary, this plain vanilla drill and practice presents words in four games. In the most useful game, children choose the odd word from a group of four and receive specific feedback. Other games present single words out of context and lack appropriate feedback.  —Miriam Furst	48K Apple. 5.25-inch disks.	Y	* *	*	* *	*	* * * *
ENTERTAINMENT	ALI PER STATE OF THE STATE OF T			MIN				
TITLE/PUBLISHER PRICE	SUMMARY	SYSTEM REQUIREMENTS	СР		TIN D		GQ	EU
Demon's Winter Strategic Simulations, Inc. 1046 Rengstorff Ave. Mountain View, CA 94043 (415) 964-1353 \$30	Hours of aimless wandering are required to determine how to accomplish your task of trapping the demon Malifon. The commands to manipulate objects are clumsy and entirely different from those used to inspect surroundings, which results in confusion. It's not worth the trouble.  —Adrian Roston	64K Apple. Two drives recommended.	Y	*	* *	*	*	* *
Jordan vs. Bird: One On One Electronic Arts 1820 Gateway Dr. San Mateo, CA 94404 (415) 572-2787 \$30-\$40	The definitive computer basketball game has been improved upon with the addition of a slam dunk contest and a three-point shootout. Once you've loosened up, you can go one-on-one with a friend or computer opponent in four different levels of intense play. The partisan crowds enjoy the game more than ever—and for good reason.  —Rob Gilpin	C 64, 256K IBM PC* with CGA. 5.25- and 3.5-inch disks (IBM).	N	* * *	* * *	* * * *	* * * *	* * *
The Manhole Activision (Mediagenic) 3885 Bohannon Dr. Menlo Park, CA 94025 (415) 329-0500 \$50	Explore a large make-believe world inhabited by creatures from your childhood in this 'game' void of wrong moves, winners, or losers. Excellent sound, typical Mac graphics, and poor animation combine to make an interesting jaunt into an ambitious adventure for the curious or young at heart.  —Jim Phelan	1MB Macintosh. Hard-disk drive. HyperCard.	N	* *	*	* * *	*	* * * *
Star Trek: First Contact Simon & Schuster Software 1 Gulf + Western Plaza New York, NY 10023 (800) 624-0023 or (800) 624-0024 in NJ \$30-\$40	Trekkies will enjoy First Contact even though it falls short of its predecessor, Rebel Universe. It offers features we've come to expect from the Star Trek series (graphic depictions of key game elements and the ability to control crew members) in addition to new features such as the Captain's auto-log and access to the Enterprise's databanks. —Jeff Donahue	128K Apple, 256K IBM PC* with CGA. Two drives (IBM). Printer required for Captain's log. 5.25- and 3.5-inch disks (IBM).	Y	* *.	* * *	* *	* *	* * *

Ratings Key: CP Copy Protected, yes or no; 0 Overall Performance; D Documentation; EM Error-Handling; PS Play System; GQ Graphics Quality; EU Ease of Use; O Poor; \* Average; \*\* Good; \*\*\* Very Good; \*\*\* Excellent: \*Computer Used for Review

# The wait is over... but the excitement has just begun.

ore than two years in the making, Warriors of Destiny sets the new standard for role-playing games. No other game can offer-you as beautifully detailed a world or as exciting an adventure. Ultima V is the game for all role-playing gamers: Warriors of Destiny will enchant the

#### Highlights of Ultima V

novice and challenge the expert.

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- Over twice the graphic detail, animation and sound effects of earlier games.
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Warriors of Desting

Screen displays shown from the Apple™. Others may vary. Allows the use of Ultima IV characters. No previous Ultima experience required.





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#### **Empire**

SYSTEM REQUIREMENTS: 512K Amiga, 512K Atari ST, 512K IBM PC\*; CGA, EGA, VGA, or Hercules; 5.25- and 3.5-inch disks (IBM)

PUBLISHER: Interstel Corp., P.O. Box 57825, Webster, TX 77598; (713) 486-4163

PRICE: \$50

COPY PROTECTED: No

OVERALL PERFORMANCE: \*\*\*\*

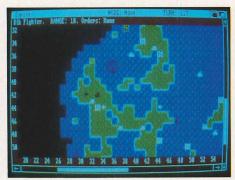
DOCUMENTATION: \*\*\*\*

PLAY SYSTEM: \*\*\*

GRAPHICS QUALITY: \*\*

EASE OF USE: \*\*\*

Empire is an easy-to-learn game that almost anyone with an interest in strategy and tactics can play. It's called a science fiction game, but has nothing to do with any form of sci-fi, being, rather, a two- or three-player game involving World War II playing pieces: battleships, carriers, transports, submarines, armies, and fighter planes. Like such traditional board games as Risk and Tri Tactics, you maneuver your forces with the idea of eliminating the other players (human or computer) or forcing them to resign.



Long-range planning and effective resource management are needed to expand your Empire.

The game is played on a "world" that the documentation suggests is in some other galaxy. Assume instead that it is simply a map generated by the computer that represents an earth-like environment into which amateur Rommels and Pattons can maneuver forces. You start with only one city, from which you can generate armies, flying machines, or naval forces, and spend the rest of the game exploring the world, conquering other cities to increase your production and facing off against the other players (all three players can be computer controlled).

Cities must be assigned the task of produc-

ing forces. These assignments can be changed to suit your strategic requirements, to replace heavy losses, or for any other reason you choose. The trick to this game is learning the balancing act of resource management, producing the exact amounts of whatever forces you need to accomplish your goals. Therefore, a good player must make long-range plans rather than just making things up as he or she goes along (building a battleship takes 60 turns to complete!).

Action comes when you encounter the other players, by which time you need sufficient forces to hold them off while you continue to expand. This means forming army groups, fleets of ships, task forces for invasions and even suicide units to lead the enemy off to attack you where you're not. It can get very complex, but needn't be so if two novices are playing. There's a good play-balance option so old hands can play newcomers, and even a way to meet the computer on even terms—no matter how good you get.

Empire is one of those games you can't tear yourself away from. It's as addictive as any war game I've played in years and has the easiest play system you're likely to encounter in these days of ever-more complex programs for the home strategist.

—JAMES DELSON



# **Entertainment News and Hints**

What to Look for in the Year to Come

**BY JIM PHELAN** 

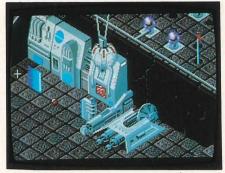


#### DESIGNERS CONFER.

More than 180 game designers and publishers converged on Milpitas, California, for the second Computer Game Developers Conference last fall. Besides dis-

cussing the creative process and advances in technology, many of the attendees were eager to voice their opinions as to where the computer gaming industry is and should be headed. One of the more important issues I heard discussed was the desire to fill voids in specific areas which, until recently, had not been heavily targeted. The developers proposed new games geared toward women as well as toward busy professionals who do not have enough time to devote hundreds of hours to an adventure. There was much disagreement as to how to entice women into the world of computer games, but short,

serialized games was one answer for those without much time to spare. Another option I found intriguing was the idea of games within games or of games with many subgoals required to accomplish the main objective. Multiplayer games were also a hot topic. Interaction between players (at the



The laser beams on the ninth hole of Zany Golf are difficult to avoid.

same site or via modem) will be stressed in a new genre of games that will expand the current rigid categorization of game types. This does not mean an end to the seemingly endless role-playing adventures now flooding the market, just the opening of new segments of the computer software industry.

FRP DOUBLE. Two companies have released new fantasy role-playing adventures. Sir-Tech continues its most popular series with Wizardry V: Heart of the Maelstrom (64K Apple, 128K IBM PC; \$50). Your mission in this dungeon adventure for novices is to rescue a Gatekeeper, while in its new (and first) text adventure—The Usurper: Mines of Qyntarr (128K Apple, 256K IBM PC; \$30)—you search for a lost orb. DataSoft's Lancelot and Time and Magik are both three-part packages on one disk. You can explore the world of Camelot or experiment with time travel if you have a 512K Amiga,

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512K Apple, 512K Atari ST, C 64, 512K IBM PC, or a 512K Macintosh (\$30-\$40).

WHEN WORLDS COLLIDE. The computer entertainment market is being invaded by major players from the worlds of coin operated and home video games. *Renegade* (512K Amiga, 128K Apple, 512K Atari ST, C 64, 512K IBM PC; \$35–\$40) and *Arkanoid* (128K Apple, 512K Atari ST, C 64, 512K IBM PC; \$30–\$35) are the first of Taito's



You know the outcome of each battle before it begins in Battle Chess.

many hits to become available for personal computers. Sega of America, Inc. will release Alien Syndrome, Out Run, and Space Harrier for the 512K Amiga, 512K Atari ST, C 64, and 512K IBM PC within the next few months through Mindscape. All three first appeared in arcades and were then translated to home video cartridges. Not to be outdone, MicroProse will release an F-15 or F-19 flight simulator this spring for the arcade! The company known for personal computer games will place across the country one-player machines that may later be wired for multiplayer capabilities. You may want to start setting aside your quarters since the graphics are supposed to be spectacular, even for a coin-op machine.

**ORIGIN ORIGINALS.** From the publishers of the *Ultima* series come two new role-playing games. The first is an arcade fantasy role-playing game. This combination has not worked well in the past, but *Times of Lore* (C 64, 256K IBM PC; \$40) looks to be an exception. *Space Rogue* (64K Apple, C 64) is a 3-D space flight simulator in which you play either a bounty hunter or the hunted. You should be able to take off in mid-March. Origin is also developing *Ultima VI* and is considering sequels to *Moebius* and *Autoduel*.

**CUTE CLASSICS.** The classic games of golf and chess will never be the same after the release of these two new programs. *Zany Golf* (512K Apple IIGS, 256K IBM PC; \$40) is nine holes of obstacle-ridden miniature golf. Not only does the familiar windmill appear, but Electronic Arts has includ-

ed magic carpets, laser beams, and moving holes. *Battle Chess* (512K Amiga, 512K IBM PC; \$50) has two different modes. One is the typical 2-D flat-board and the other has 3-D animation that enables you to see and hear the pieces battle it out. The game's publisher, Interplay, has a winner on its hands as long as the program can actually play a good game of chess.

NO PEACE. For those of you who can't get enough World War II action, Strategic Simulations has released a sequel to Panzer Strike!, the best-selling war game construction set. Typhoon of Steel (64K Apple, C 64; \$50) allows you to simulate single battles or an entire campaign from the Pacific Theatre, the Asian Theatre, or the European Theatre involving American and German troops. For modern combat you may want to consider Heavy Metal (512K Amiga, C 64, 256K IBM PC; \$40-\$45). Access Software makes you company commander and gives you control over the movement of battle tanks with 120mm cannons, Fast Attack Vehicles with TOW missiles, and Air Defense Anti-Tank Systems. Quick reflexes are needed for MicroIllusions's Firepower (512K Amiga, C 64, 512K IBM PC, 1 MB Macintosh; \$25-\$33), an arcade-style tank battle where your opponent can be the computer, another player, or a player via modem. If you don't already own a modem, you might want to start shopping around for one since a whole slew of games with modem options will be released in 1989.

#### **GAME HINTS**

**Ultima V: Warriors of Destiny** (Origin Systems). As the legendary Avatar, you embark upon a quest to discover the fate of Lord British and unseat the merciless tyrant Blackthorn.

- ★ Camping outdoors can bring a helpful and familiar apparition.
- ★ Even guards have to eat lunch.
- ★ To defeat each Shadowlord, use the corresponding Shard of Evil while he stands upon its opposing flame.
- ★ Searching tree stumps can bring wonderful surprises.
- ★ A magic carpet can be found in Lord British's castle.
- ★ You can easily fall into the Underworld by walking into a waterfall, a whirlpool, or on the collapsed entrance of a dungeon.
- ★ Dawn is beautiful and hard to resist.

- ★ Ask Lord Michael in Empath Abbey for mountain climbing assistance.
- ★ You must visit all the shrines in order to find the word to enter the Dungeon of Doom.
- ★ The Crystaline Sword lies hidden in the mountains of Serpent's Spine.

—BEN WU San Jose, California

#### **Ultima V: Warriors of Destiny**

- ★ Play the following notes on the harpsichord in Lord British's bedroom: 6-7-8-9-8-7-8-7-6-7-6-5-3.
- ★ The black badge will let you enter Blackthorn's castle unharmed.
- ★ Some wells you see around town are for wishing.
- ★ There are several spells you can acquire that are not listed in the game rules, including a food-create spell and a spell that turns enemies into rats.
- ★ If you find yourself in prison, chat with your fellow inmates.
- ★ Each dungeon leads to a section of the Underworld. There is something you need in all but two sections.
- ★ The crown is located in Blackthorn's castle and negates magical attack.
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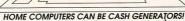
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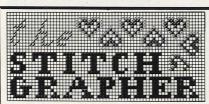
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# Honing That Work-at-Home Image

#### BY NICK SULLIVAN



An Italian importer I met at a business event, upon hearing that I worked at home, said, "You mean, in bed!" I protested. I had an office, a regimen. The work ethic flowed to the tips of my fingers

and toes. Busy, busy, busy!

"Don't be insulted! That's the way to live," approved this charming, well dressed, Milanese businessman, who clearly considers working at home to be la dolce vita. But for many of his American counterparts, living as they do in the land of the quarterly report, working at home is as alien as a siesta

I get calls, as do all homeworkers, that start like this: "I'm sorry to bother you at home," or, "They gave me your number at the office." Does the caller think I'm lying in bed in a silk robe sipping cappucino?

How does the homeworker counteract this attitude? By acting as professional, or more so, than he or she would in an office. Let's face it: The "office" image confers professionalism on all kinds of sloppy work. Why not adopt the office operating procedure, to answer those who assume that I am unprofessional because I work at home? I have the office tools, why not the office manner?

I have a bad habit that—if changed would probably straighten out these misguided callers. When I answer the phone I say "hello." That's standard operating procedure in a house, but it leaves business callers wondering whom they've reached. I could improve on that by saying, "Hello, Nick Sullivan," to let callers know that they have reached me—a live person, out of bed, clothed, and ready to field queries and complaints.

A good phone manner is important because it's the main way homeworkers can make an impression on others. After all, people can't see that your hair is rumpled, your eyelids are drooping, your tie is stained, and your shoes are scuffed-but they might hear it in your voice.

I perceived the phone as image-maker as soon as I started working at home, three years ago. My antiquated pulse phone service (touch-tone service is not yet available in my calling area) attracted some choice comments (and still does). Also, 10 times a

day I'd hear callers say, "I can barely hear you, where are you?" I couldn't blame it on the "office"—the office was me. This made me extremely paranoid. Was Big Brother undermining my experimental workstyle? Then I found that a nail through the phone line was responsible for the far-away sound. Ever since, I've become unusually conservative. I generally shop for bargains, but when it comes to phone systems I've turned into a knee-jerk AT&T consumer.

Putting myself in the position of a caller, I can point to people who have impressed me with their professional phone habits. I once talked to Sarah Charf, public relations manager for Microsoft Corp., for 10 minutes before finding out she was at home. She had



A second phone line and sharp letterhead are hammer and saw to an independent homeworker.

bounced her office phone out to her house where she was working because her child was sick. "Transparent to the user," as the software people say. If I had called Microsoft and been told that she was working at home, I probably would have said, "That's okay, I'll try her tomorrow." Even I would have thought that maybe she didn't want to be

Another time, I called Andy Sacks, an independent photographer who works from home. I got the standard answering-machine message, except that he ended by giving a code that let callers send a message to him via remote beeper. He promised to return the call "immediately." By using the technology at hand, Sacks not only compensates for the lack of a support staff, but also turns the telephone into an effective sales tool.

It's not surprising that Sacks, as a selfemployed independent, puts his best foot forward-he's looking for work. For instance, every six months or so, I get (as do many other editors) Sacks's latest promotional flyer, a glossy color photograph with his business information. I'm on the "contact list" in one of his databases and so I automatically get the mail-merged memorytickler.

What is surprising is that more independents don't operate this way. Many people procrastinate, as I do, about changing phone greetings; we've been "meaning to change" for years. But aside from making bad first impressions, independents who don't bother to add a professional veneer to their work are missing a big chance to promote themselves.

A lot of people looking for clients and customers have only one phone line, so that the caller often gets an annoying busy signal. A lot of work-hounds don't even have letterhead, and send out letters on thin computer paper that's been mauled by a dot-matrix printer. These are not the hallmarks of a serious professional. A second phone line and sharp letterhead are hammer and saw to an independent homeworker. Against the canvas of dot-matrix printouts covering everyone's desk, good letterhead stands out like a signature in watercolor.

Likewise, in an over-programmed world where everyone is "running behind," an assignment turned in on time makes you and your project manager look good. And in a world of telephone tag, a person who is always reachable and responsive is the person who will get the job.

As in any office, constant fine tuning is required. I have two phone lines (one bounces to the other when busy), a good phone (AT&T 412), and the resolve to give my name when I answer. But my wife also works at home, and I use a modem and a fax machine throughout the day, so two lines are not enough. Sometimes I forget to turn the fax off auto-answer, so when people hear the high-pitched sound they must think they've reached an air-raid shelter. Not very professional!

I'm not overly concerned with image, but since leaving the office for home I have developed a heightened sensitivity to the way I present myself to others (and vice versa) and I'm a full-time employee of a big company. Self-employed independents working at home should be even more aware of the impression they make on the quarterly-report world. As homeworkers, we may be living la dolce vita, but we are living it in a country not quite as carefree as Italy. ■

NICK SULLIVAN is a senior editor of HOME-OFFICE COMPUTING. He telecommutes to the New York office from Massachusetts.





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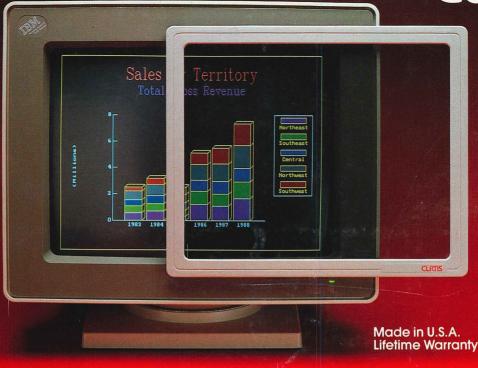
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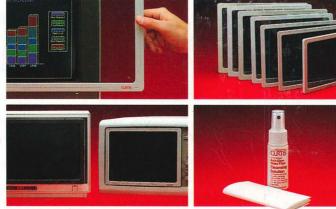
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